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[54] **PYRIDYL SULPHONYL UREAS AS HERBICIDES AND PLANT GROWTH REGULATORS**

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[21] Appl. No.: **337,139**

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Related U.S. Application Data

[60] Continuation of Ser. No. 108,896, Aug. 18, 1993, abandoned, which is a division of Ser. No. 859,513, Jun. 8, 1992.

[30] **Foreign Application Priority Data**

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Dec. 24, 1990	[WO]	WIPO	PCT/EP90/02308

[51] **Int. Cl.**[6] **C07D 401/12**; A01N 43/54

[52] **U.S. Cl.** **504/215**; 544/320; 544/321; 544/324; 544/331; 544/122; 544/123

[58] **Field of Search** 504/215; 544/320, 544/122, 123, 321, 324, 331

[56] **References Cited**

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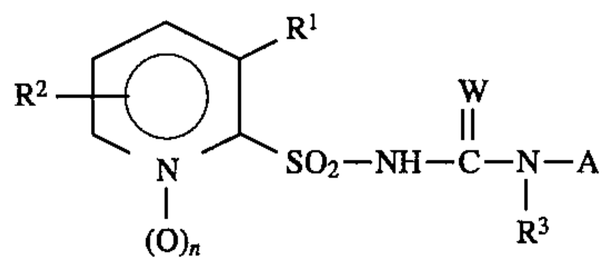
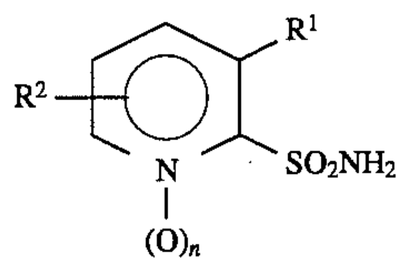
[57] **ABSTRACT**

PYRIDYL SULPHONYL UREAS AS HERBICIDES AND PLANT GROWTH REGULATORS



(I)



(II)

Compounds of formula (I), where R^1, R^2, n, W, R^3 and A are as defined in claim **1**, are suitable for use as herbicides and plant growth regulators. They can be produced by a process similar to known processes. To produce them, new compounds of formula (II) are reacted with a carbamate of formula

$$R^*—O—CO—NR^3A,$$

where R^3 stands for phenyl or alkyl.

The compounds of formula (II) can be obtained from the corresponding sulphochlorides.

6 Claims, No Drawings

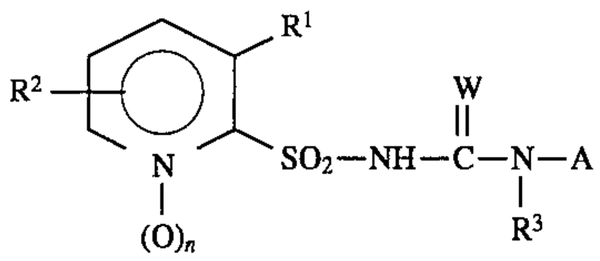
PYRIDYL SULPHONYL UREAS AS HERBICIDES AND PLANT GROWTH REGULATORS

This application is a continuation of application Ser. No. 08/108,896, filed Aug. 18, 1993, now abanconed which in turn is a divisional of application Ser. No. 07/859,513, filed Jun. 8, 1992 pending.

It is known that some 2-pyridylsulfonylureas have herbicidal and plant growth-regulating properties; cf. EP-A-13, 480, EP-A-272,855, EP-A-84,224, U.S. Pat. No. 4,421,550, EP-A-103,543 (U.S. Pat. No. 4,579,583), U.S. Pat. No. 4,487,626, EP-A-125,864, WO 88/04297.

It has now been found that 2-pyridylsulfonylureas having specific radicals in the 3-position of the pyridyl radical are particularly highly suitable as herbicides and growth regulators.

The present invention relates to compounds of the formula (I) or their salts



(I)

in which

R^1 is $—OSO_2NR^4R^5$, $—NR^6R^7$ or iodine,

R^2 is H, $(C_1–C_4)$alkyl, preferably $(C_1–C_3)$alkyl, $(C_1—C_3)$haloalkyl, halogen, NO_2, CN, $(C_1–C_3)$alkoxy, $(C_1–C_3)$haloalkoxy, $(C_1–C_3)$alkylthio, $(C_1–C_3)$alkoxy-$(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxycarbonyl, $(C_1–C_3)$alkylamino, di-[$(C_1–C_3)$alkyl]amino, $(C_1–C_3)$alkylsulfinyl, $(C_1–C_3)$alkylsulfonyl, $SO_2NR^aR^b$ or $C(O)NR^aR^b$), R^a)and R^b)independently of one another are H, $(C_1–C_3)$alkyl, $(C_3–C_4)$alkenyl, propargyl, or together are $–(CH_2)_4—$, $—(CH_2)_5—$]or $—CH_2CH_2OCH_2CH_2—$,

R^3 is H or CH_3,

R^4 is H, $(C_3–C_4)$alkyl)$(C_1–C_3)$alkenyl, $(C_1–C_3)$alkoxy or $(C_3—C_4)$alkynyl, preferably propargyl, and

R^5 is H, $(C_1–C_3)$alkyl, $(C_1–C_4)$alkenyl or $(C_1–C_4)$alkynyl, preferably propargyl, or

R^4 and R^5 together are $—(CH_2)_4—$, $—(CH_2)_5—$ or $—CH_2CH_2OCH_2CH_2—$,

^{6} is H, $(C_1–Cs)$alkyl, which is unsubstituted or substituted by one or more radicals from the group comprising halogen, $(C_1–C_4)$alkoxy, $(C_1–C_4)$alkylthio, $(C_1–C_4)$alkylsulfinyl, $(C_1–C_4)$alkylsulfonyl, $(C_1–C_4$-alkoxy) carbonyl and CN, $(C_3–C_6)$alkenyl which is unsubstituted or substituted by one or more halogen atoms, $(C_3—C_6)$alkynyl which is unsubstituted or substituted by one or more halogen atoms, $(C_1–C_4)$alkylsulfonyl which is unsubstituted or substituted by one or more halogen atoms, phenylsulfonyl where the phenyl radical is unsubstituted or substituted by one or more radicals from the group comprising halogen, $(C_1–C_4)$alkyl and $(C_1–C_4)$alkoxy, $(C_1–C_4)$alkoxy or $(C_1–C_4$-alkyl)carbonyl which is unsubstituted or substituted by one or more halogen atoms,

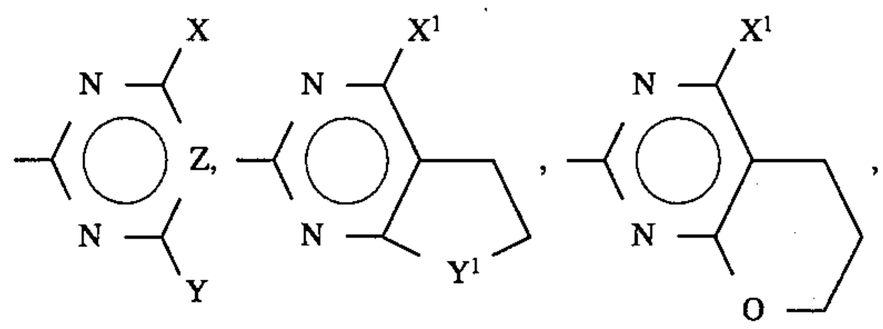
R^7 $(C_1–C_4)$alkylsulfonyl which is unsubstituted or substituted by one or more halogen atoms, phenylsulfonyl where the phenyl radical is unsubstituted or substituted by one or more radicals from the group comprising halogen, $(C_1–C_4)$alkyl and $(C_1–C_4)$alkoxy, or di-[$(C_1–C_4)$alkyl]aminosulfonyl or

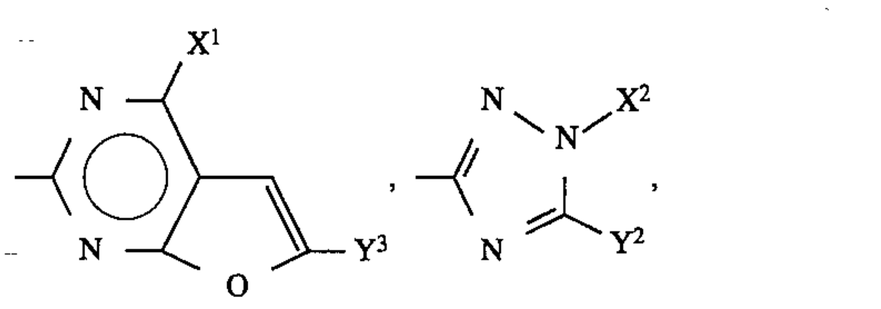
R^6 and R^7 together are a chain of the formula $—(CH_2)_m—SO_2—$, where the chain can additionally be substituted by 1 to 4 $(C_1–C_3)$alkyl radicals and m is 3 or 4,

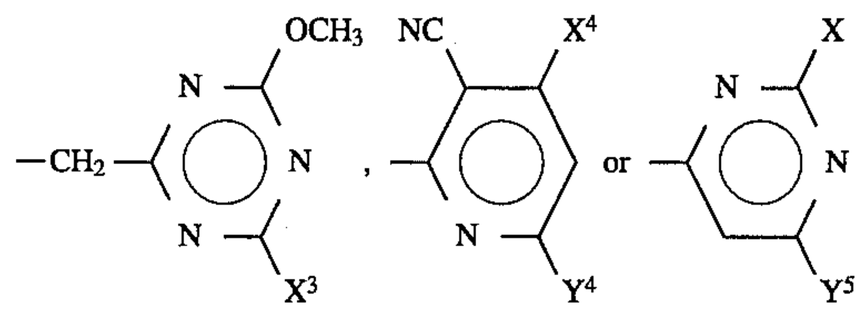
n is zero or 1,

W is O or S,

A is a radical of the formula







X is H, halogen, $(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxy, where the two last-mentioned radicals are unsubstituted or monosubstituted or polysubstituted by halogen or monosubstituted by $(C_1–C_3)$alkoxy,

Y is H, $(C_1–C_4)$alkyl, $(C_1–C_3)$alkoxy or $(C_1–C_3)$alkylthio, where the abovementioned alkyl-containing radicals are unsubstituted or monosubstituted or polysubstituted by halogen. or monosubstituted or disubstituted by $(C_1–C_3)$alkoxy or $(C_1–C_3)$alkylthio, and also a radical of the formula $NRsR^9$, $(C_3–C_6)$cycloalkyl, $(C_2–C_4)$alkenyl, $(C_2–C_4)$alkynyl, $(C_3–C_4)$alkenyloxy or $(C_3–C_4)$alkynyloxy,

Z is CH or N,

R^8 and R^9 independently of one another are H, $(C_1–C_3)$alkyl or $(C_3—C_4)$alkenyl,

X^1 is CH_3), OCH_3, OC_2H_5)or OCF_2H,

Y^1 is —O— or $—CH_2—$,

X^2 is $CH_3C_2H_5$ or CH_2CF_3,

Y^2 is OCH_3, OC_2H_5, SCH_5, SC_2H_5, CH_3 or C_2H_5,

X^3 is CH_3 or OCH_3,

Y^3 is H or CH_3,

X^4 is CH_3, OCH_3, OC_2H_5, CH_2OCH_3 or Cl,

Y^4 is CH_3, OCH_3, OC_2H_5 or Cl,

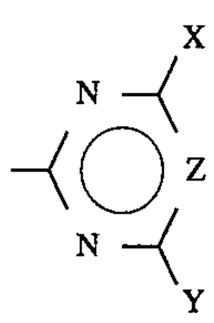
Y^5 is CH_3, C_2H_5, OCH_3 or Cl.

In the formula (I), alkyl, alkoxy, haloalkyl, alkylamino and alkylthio radicals and the corresponding unsaturated and/or substituted radicals can in each case be straight-chain or branched. Alkyl radicals, also in combined meanings such as alkoxy, haloalkyl etc., are methyl, ethyl, n- or i-propyl, alkenyl and alkynyl radicals have the meaning of the possible unsaturated radicals corresponding to the alkyl radicals, such as 2-propenyl, 2- or 3-butenyl, 2-propynyl, 2- or 3-butynyl. Halogen is fluorine, chlorine, bromine or iodine.

The compounds of the formula (I) can form salts in which the hydrogen of the $—SO_2—NH$ group is replaced by a cation which is suitable for agricultural purposes. These salts

are, for example, metal salts, in particular alkali metal or alkaline earth metal salts, or alternatively anunonium salts or salts with organic amines. Salt formation can also take place by addition of a strong acid to the pyridine moiety of the compound of the formula (I). Suitable acids for this are HCl, HBr, H_2SO_4 or HNO_3.

Preferred compounds of the formula (I) or their salts are those in which n=zero, W=O and A is a radical of the formula



in which X, Y and Z are defined as described above.

Preferred compounds of the formula I or their salts are also those in which

R^2, R^4, R^b, W and A are as defined above and

R^4 and R^5 independently of one another are $(C_1–C_3)$alkyl, allyl or propargyl or

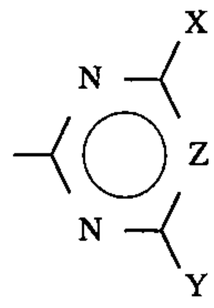
R^4 and R^5 together are $—(CH_2)—$, $—(CH_2)_5—$ or $—CH_2CH_2OCH_2CH_2—$,

R^6 is H, $(C_1–C_4)$alkyl which is unsubstituted or substituted by one or more halogen atoms or by a radical from the group comprising $(C_1–C_4)$alkoxy, $(C_1–C_3)$alkylthio, $(C_1–C_4)$alkylsulfonyl, (C_{C4})alkoxycarbonyl and CN, $(C_1–C_3)$alkenyl, $(C_1–C_4)$alkyl, $(C_1–C_3)$alklysulfonyl, phenylsulfonyl, phenylsulfonyl which is substituted by one to three radicals from the group comprising halogen, $(C_1–C_4)$alkyl and $(C_1–C_4)$alkoxy, $(C_1–C_4)$alkoxy or $(C_1–C_4)$alkylcarbonyl,

R^7 $(C_1–C_4)$alkylsulfonyl, phenylsulfonyl or phenylsulfonyl which is substituted by 1, to 3 radicals from the group comprising halogen, $(C_1–C_4)$alkyl and $(C_1–C_3)$alkoxy, or di-$(C_1–C_4$-alkyl)-aminosulfonyl or

R^6 and R^7 together are a chain of the formula $—(CH_2)_mSO_2—$ where m is 3 or 4.

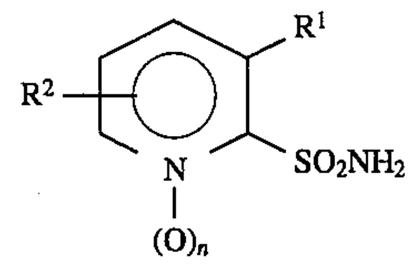
Particularly preferred compounds of the formula (I) or their salts are those in which R^2 is H, $(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxy, halogen or $(C_1–C_3)$alkylthio, R^4 and R^5 independently of one another are $(C_1–C_3)$alkyl, R^6 is hydrogen, $(C_1–C_4)$alkyl or $(C_1–C_3)$alkylsulfonyl, R^7 is $(C_1–C_3)$alkylsulfonyl and A is a radical of the formula



in which Z is CH or N, X is halogen, $(C_1–C_2)$alkyl, $(C_1–C_2)$alkoxy, OCF_2H, CF_3 or OCH_2CF_3 and Y is $(C_1–C_2)$alkyl, $(C_1–C_2)$alkoxy or OCF_2H, and in particular the compounds defined above in which n=zero and W is an oxygen atom.

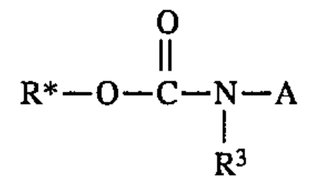
The present invention further relates to processes for the preparation of the compounds of the formula (I) or their salts, which comprise

(a) reacting a compound of the formula (II)



(II)

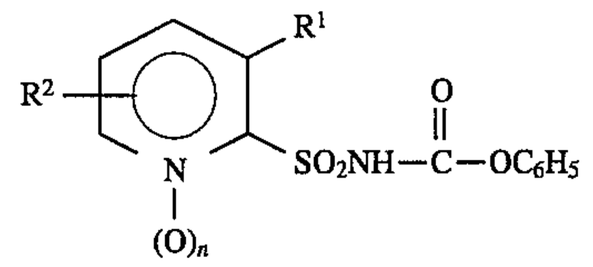
with a heterocyclic carbamate of the formula (III)



(III)

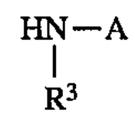
in which R* is phenyl or $(C_1–C_4)$alkyl, or

(b) reacting a pyridylsulfonylcarbamate of the formula (IV)



(IV)

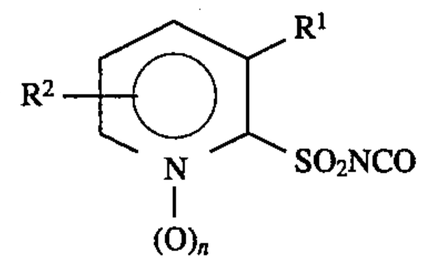
with an aminoheterocycle of the formula (V)



(V)

or

(c) reacting a sulfonyl isocyanate of the formula (VI)



(VI)

with an aminoheterocycle of the formula $R^3—NH—A$ (V) or

(d) first reacting an aminoheterocycle of the formula $R^3—NH—A$ (V) in a one-pot reaction with phosgene in the presence of a base, such as, for example, triethylamine, and reacting the intermediate formed with a pyridinesulfonamide of the formula (II) (for example analogously to EP-A-232,067).

The reaction of the compounds of the formulae (II) and (III) is preferably carried out under base catalysis in an inert organic solvent, such as, for example, dichloromethane, acetonitrile, dioxane or THF at temperatures between 0° C. and the boiling point of the solvent. 1,8-Diazabicyclo[5.4.0] undec-7-ene (DBU) or trimethylaluminum or triethylaluminum is preferably used as the base.

The sulfonamides (II) are novel compounds. The invention also relates to them and their preparation. They are obtained starting from suitably substituted 2-halopyridines, which are reacted with S-nucleophiles such as, for example, benzylmercaptan or thiourea. The compounds formed in this way are converted with sodium hypochlorite or chlorine into the sulfochlorides (analogously to EP-A-272,855), which are then either reacted directly with ammonia or with tert.-butylamine via the tert.butylamides with subsequent protective group removal to give the sulfonamides of the formula (II).

The carbamates of the formula (III) can be prepared by methods which are described in South African patent applications 82/5671 and 82/5045, or EP-A-70804 (US-A-4,480, 101) or RD 275056.

The reaction of the compounds (IV) with the aminoheterocycles (V) is preferably carried out in inert aprotic

solvents such as, for example, dioxane, acetonitrile or tetrahydrofuran at temperatures between 0° C. and the boiling point of the solvent. The starting materials (V) required are known from the literature or can be prepared by processes which are known from the literature. The pyridylsulfonylcarbamates of the formula (IV) are obtained analogously to EP-A-44,808 or EP-A-237,292.

The pyridylsulfonylisocyanates of the formula (VI) can be prepared analogously to EP-A-184,385 and reacted with the aminoheterocycles (V).

The salts of the compounds of the formula (I) are preferably prepared in inert solvents such as, for example, water, methanol or acetone at temperatures of 0°–100° C. Suitable bases for the preparation of the salts according to the invention are, for example, alkali metal carbonates, such as potassium carbonate, alkali metal and alkaline earth metal hydroxides, ammonia or ethanolamine. HCl, HBr, H_2SO_4 or HNO_3 are particularly suitable as acids for salt formation.

By 'inert solvents' in the process variants above, solvents are in each case meant which are inert under the particular reaction conditions, but which do not have to be inert under all reaction conditions.

The compounds of the formula (I) according to the invention have an excellent herbicidal activity against a broad spectrum of economically important monocotyledon and dicotyledon weeds. Even perennial weeds, which are difficult to control and shoot from rhizomes, root stocks or other perennial organs, are well controlled by the active compounds. It is irrelevant here whether the substances are applied pre-sowing, pre-emergence or postemergence. In particular, some representatives of the monocotyledon and dicotyledon weed flora which can be controlled by the compounds according to the invention may be mentioned by way of example without a restriction to certain species being intended by their mention.

On the monocotyledon weed species side, for example, Avena, Lolium, Alopecurus, Phalaris, Echinochloa, Digitaria, Setaria and Cyperus species from the annual group and on the perennial species side Agropyron, Cynodon, Imperata and Sorghum and also perennial Cyperus species are well controlled.

In the case of dicotyledon weed species, the spectrum of action extends to species such as, for example, Galium, Viola, Veronica, Lamium, Stellaria, Amaranthus, Sinapis, Ipomoea, Matricaria, Abutilon and Sida on the annual side and Convolvulus, Cirsium, Rumex and Artemisia in the case of the perennial weeds.

Under the specific cultivation conditions, weeds occurring in rice, such as, for example, Sagittaria, Alisma, Eleocharis, Scirpus and Cyperus are also outstandingly controlled by the active compounds according to the invention.

If the compounds according to the invention are applied to the surface of the soil before germination, the emergence of the weed seedlings is either completely prevented or the weeds grow to the seed leaf stage, but then cease their growth and finally die completely after the passage of three to four weeks.

On application of the active compounds to the green parts of plants post-emergence, a drastic stop to growth also occurs very rapidly after the treatment and the weed plants remain at the growth stage present at the time of application or die completely after a certain time, so that in this manner weed competition which is damaging for the crop plants is eliminated very early and in a lasting manner.

Although the compounds according to the invention have an excellent herbicidal activity against monocotyledon and dicotyledon weeds, crop plants of economically important crops such as, for example, wheat, barley, rye, rice, corn, sugarbeet, cotton and soya are only damaged insubstantially or not at all. For these reasons, the present compounds are very highly suitable for selectively controlling undesired plant growth in agricultural productive plantings.

Moreover, the substances according to the invention show excellent growth regulatory properties in crop plants. They intervene in a regulating manner in the plant's own metabolism and can thus be employed for influencing plant contents in a controlled manner and for simplifying harvesting such as, for example, by causing desiccation and stunting of growth. In addition, they are also suitable for the general control and inhibition of undesired vegetative growth without killing the plants. In many monocotyledon and dicotyledon crops, inhibition of the vegetative growth plays a great role, as lodging can be reduced by this or completely prevented.

The compounds according to the invention can be used in the customary preparations in the form of wettable powders, emulsifiable concentrates, sprayable solutions, dusting agents or granules. The invention therefore also relates to herbicidal and plant growth-regulating agents which contain compounds of the formula (I) or their salts.

The compounds of the formula (I) can be formulated in various ways, depending on which biological and/or physicochemical parameters are given. Examples of suitable formulation possibilities are: wettable powders (WP), water-soluble powders (SP), water-soluble concentrates, emulsifiable concentrates (EC), emulsions (EW), such. as oil-in-water and water-in-oil emulsions, sprayable solutions, suspension concentrates (SC), dispersions based on oil or water, oil-miscible solutions, capsule suspensions (CS), dusting agents (DP), seed dressings, granules for broadcasting and application to the soil, granules (GR) in the form of microgranules, sprayable granules, swellable granules and adsorption granules, water-dispersible granules (WG), water-soluble granules (SG), ULV formulations, microcapsules and waxes.

These individual formulation types are known in principle and are described, for example, in: Winnacker-Küchler, "Chemische Technologie", volume 7, C. Hauser Verlag Munich, 4th Edition 1986; Wade van Valkenburg, "Pesticide Formulations", Marcel Dekker N.Y., 1973; K. Martens, "Spray Drying Handbook", 3rd Ed. 1979, G. Goodwin Ltd. London.

The necessary formulation auxiliaries such as inert materials, surfactants, solvents and other additives are also known and are described, for example, in: Watkins, "Handbook of Insecticide Dust Diluents and Carriers", 2nd Ed., Darland Books, Caldwell N.J.; H.v. Olphen, "Introduction to Clay Colloid Chemistry"; 2nd Ed., J. Wiley and Sons, N.Y.; C. Marsden, "Solvents Guide", 2nd Ed., Interscience, N.Y. 1963; McCutcheon's "Detergents and Emulsifiers Annual", MC Publ. Corp., Ridgewood N.J.; Sisley and Wood, "Encyclopedia of Surface Active Agents", Chem. Publ. Co. Inc., N.Y. 1964; Schönfeldt, "Grenzflächenaktive Äthylenoxidaddukte" (Surface-active ethylene oxide adducts), Wiss. Verlagsgesell., Stuttgart 1976; Winnacker-Küchler, "Chemische Technologie" (Chemical Technology), Vol. 7, C. Hauser Verlag Munich, 4th Edition, 1986.

Combinations with other pesticidally active substances, fertilizers and/or growth regulators can also be prepared based on these formulations, for example in the form of a finished formulation or as a tank mix.

Wettable powders are preparations which can be dispersed uniformly in water which apart from the active compound and in addition to a diluent or inert substance also

contain wetting agents, for example polyoxyethylated alkylphenols, polyoxyethylated fatty alcohols and fatty amines, fatty alcohol polyglycol ether sulfates, alkane sulfonates or alkylbenzenesulfonates and dispersants, for example sodium ligninsulfonate, sodium 2,2'-dinaphthylmethane- 6,6'-disulfonate, sodium dibutylnaphthalenesulfonate or alternatively sodibm oleylmethyltaurate.

Emulsifiable concentrates are prepared by dissolving the active compound in an organic solvent, for example butanol, cyclohexanone, dimethylformamide, rylene or alternatively high-boiling aromatics or hydrocarbons with the addition of one or more emulsifiers. Examples of emulsifiers which can be used are: calcium alk-ylarylsulfonates such as Ca dodecylbenzenesulfonate or nonionic emulsifiers such as fatty acid polyglycol esters, alk-ylary. polyglycol ethers, fatty alcohol polyglycol ethers, propylene oxide-ethylene oxide condensation products, alkyl polyethers, sorbitan fatty acid esters, polyoxyethylene sorbitan fatty acid esters, polyoxyethylene sorbitol esters.

Dusting agents are obtained by grinding the active compound with finely divided solid substances, for example talc, natural clays such as kaolin, bentonire and pyrophyllite, or diatomaceous earth.

Granules can be prepared either by spraying the active compound onto adsorptive, granulated inert material or by applying active compound concentrates by means of adhesives, for example polyvinyl alcohol, sodium polyacrylate or alternatively mineral oils, to the surface of carriers such as sand, kaolinires or granulated inert material. Suitable active compounds can also be granulated in the manner customary in the preparation of fertilizer granules, if desired mixed with fertilizer granules.

The agrochemical preparations as a rule contain 0.1 to 99 percent by weight, in particular 0.1 to 95% by weight, of active compound of the formula (I).

In wettable powders the active compound concentration is, for example, about 10 to 90% by weight, the remainder to 100% by weight is composed of customary formulation components. In emulsifiable concentrates, the active compound concentration can be about 1 to 85% by weight, usually 5 to 80% by weight. Pulverulent formulations contain about 1 to 25% by weight, usually 5 to 20% by weight of active compound, sprayable solutions about 0.2 to 20% by weight, usually 2 to 20% by weight of active compound. In the case of granules, the active compound content in some cases depends on whether the active compound is liquid or solid. As a rule, the content in the water-dispersible granules is between 10 and 90% by weight.

In addition, said active compound formulations optionally contain the adhesives, wetting agents, dispersants, emulsifiers, penerrants, solvents, fillers or carriers customary in each case.

For application, the formulations in commercially available form are optionally diluted in a customary manner, for example by means of water in the case of wettable powders, emulsifiable concentrates, dispersions and water-dispersible granules. Pulverulent preparations, granules for application to the soil or broadcasting and sprayable solutions are customarily not diluted further with other inert substances before application.

The required application rate of the compounds of the formula (I) varies, inter alia, with the external conditions such as temperature, humidity and the nature of the herbicide used. It can vary within wide limits, for example between 0.001 and 10.0 kg/ha or more of active substance, but it is preferably between 0.005 and 5 kg/ha.

Mixtures or mixed formulations with other active compounds, such as, for example, insecticides, acaricides, herbicides, safeners, fertilizers, grow-oh regulators or fungicides are also optionally possible.

A. CHEMICAL EXAMPLES

Example 1

2-Benzylthio-3-iodopyridine

A solution of 34.0 g (0.15 mol) of 2-fluoro-3-iodopyridine and 18.6 g (0.15 mol) of benzylmercaptan in 250 ml of acetonitrile is heated under reflux with 22.8 g (0.165 mol) of potassium carbonate for 8 h. The mixture is cooled, the solvent is removed on a rotary evaporator, the residue is taken up in dichloromethane and the organic phase is washed with water. After drying with sodium sulfate, evaporating and distilling the oily residue in vacuo, 37.3 g (76% of theory) of 2-benzylthio- 3-iodopyridine of boiling point 150°–153° C. at 0.1 mbar are obtained.

Example 2

3-Iodo-2-pyridinesulfonamide

510 ml (0.34 mol) of a 5% strength sodium hypochlorite solution are added dropwise at 0° C. to a mixture of 25.0 g (76.5 mmol) of 2-benzylthio-3-iodopyridine, 125 ml of dichloromethane, 60 ml of water and 38 ml of concentrated hydrochloric acid. The mixture is stirred at 0° C. for 30 min, extracted 3× using 100 ml of dichloromethane each time and the organic phase is dried using sodium sulfate. The solution thus obtained is cooled to –20° C. 6.8 g (0.4 mol) of ammonia is passed in at this temperature in the course of 20 min, and the mixture is stirred at –20° C. for 2 h and allowed to come to room temperature. The reaction mixture is washed with water and the organic phase is dried and evaporated. Trituration of the residue with diisopropyl ether gives 15.5 g (71% of theory) of 3-iodo- 2-pyridinesulfonamide of melting point 247°–250° C. (dec.)

Example 3

3-(4,6-Dimethoxypyrimidin-2-yl)-1-(3-iodo-2-pyridylsulfonyl) urea

1.2 g (0.081 mol) of 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU) are added to a suspension of 2.1 g (7.4 mmol) of 3-iodo- 2-pyridinesulfonamide and 2.2 g (8.1 mmol) of N-(4,6-dimethoxypyrimidine-2-yl)phenyl carbamate in 30 ml of ace=onitrile. The resulting solution is stirred at room temperature for 45 min and 20 ml of water are then added. The mixture is acidified to pH 4 using hydrochloric acid and the precipitated product is filtered off with suction. 3.2 g (93% of theory) of 3-(4,6-dimethoxypyrimidin- 2-yl)-1-(3-iodo-2-pyridylsulfonyl) urea of melting point 161°–162° C. (dec.) are obtained.

Example 4

3-Dimethylsulfamoyloxy-2-pyridinesulfonamide

107 ml (72 mmol) of a 5% strong-oh sodium hypochlorite solution are added dropwise at 0° C. to a mixture of 5.7 g (17.6 mmol) of 2-benzylthio-3-dimethylsulfamoyloxypyridine, 30 ml of dichlorome=hane,15 ml of water and 8.5 ml of concentrated hydrochloric acid. The mixture is stirred at 0° C. for 30 min, extracted 3× using 20 ml of dichloromethane each time and the organic phase is dried using sodium sulfate. The solution thus obtained is cooled to –70°

C. Ammonia is passed in at this temperature until the reaction mixture gives a distinctly alkaline reaction. After stirring at −70° C. for 3 hours, the mixture is allowed to come to room temperature and is washed with water. The organic phase is dried and evaporated. 3.0 g (61% of theory) of 3-dimethylsulfamoyloxy- 2-pyridinesulfonamide are obtained;

NMR ($CDCl_3$): δ (ppm)=3.06 (s, 6H, $N(CH_3)_2$) , 5.80 (s, 2H, NH_2), 7.48 (dd, 1H), 7.98 (dd, 1H), 8.38 (dd, 1H).

Example 5

3-(4,6-Dimethoxypyrimidin-2-yl)-1-(3-dimethylsulfamoyloxy- 2-pyridylsulfonyl) urea

1.9 g (12.7 mmol) of 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU) are added to a suspension of 3.0 [lacuna] (10.6 mmol) of 3-dimethylsulfamoyloxy-2-pyridinesulfonamide and 3.4 g (12.7 mmol) of N-(4,6-dimethoxypyrimidin- 2-yl) phenyl carbamate in 40 ml of acetonitrile. The resulting solution is stirred at room temperature for 1 h and 30 ml o f water are then added. The mixture is acidified to pH 4 using hydrochloric acid and the precipitated product is filtered off with suction. After triturating with diethyl ether, 2.1 g (42% of theory) of 3-(4,6-dimethoxypyrimidin-2-yl)-1-(3-dimethylsulfamoyloxy- 2-pyridylsulfonyl) urea of melting point 155°– 157° C. are obtained.

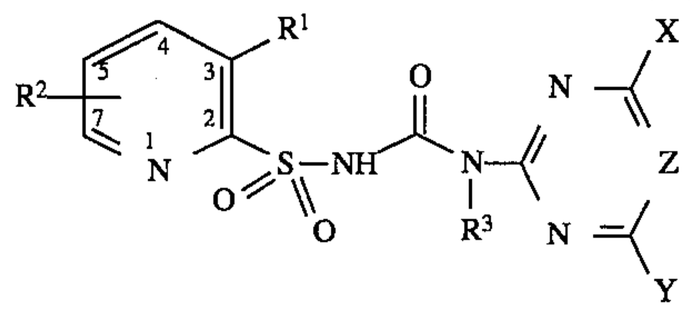
Example 6

3-(4,6-Dimethoxy-1,3,5-triazin-2-yl)-1-(3-iodo-2-pyridylsulfonyl)urea

9.0 ml (18 mmol) of a 2M solution of trimethylaluminum in toluene are added dropwise at room temperature to 4.3 g (15 mmol) of 3-iodo-2-pyridinesulfonamide in 150 ml of dichloromethane. After evolution of gas has ceased, 3.85 [lacuna] (18 mmol) of methyl 4,6-dimethoxy-1,3,5-triazin-2-yl-carbamate in 20 ml of dichloromethane is added dropwise and the resulting solution is refluxed for 24 hours. The mixture is cooled and poured into 150 ml of ice-cold 1N hydrochloric acid. The organic phase is separated off and the aqueous phase is extractd 2× using dichloromethane. The organic phase is dried and evaporated. After triturating the crude product with diethyl ether, 3.1 g (44% of theory) of 3-(4,6-dimethoxy-1,3,5-triazin- 2-yl)-1-(3-iodo-2-pyridylsulfonyl)urea of melting point 155 ° C. (dec.) are obtained.

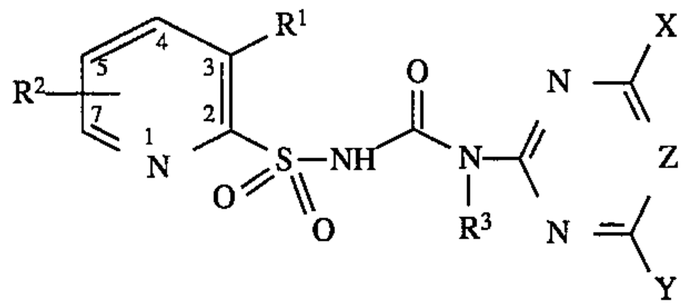
The compounds in the following Tables 1 to 4 are obtained analogously to the processes of Examples 1–6.

TABLE 1



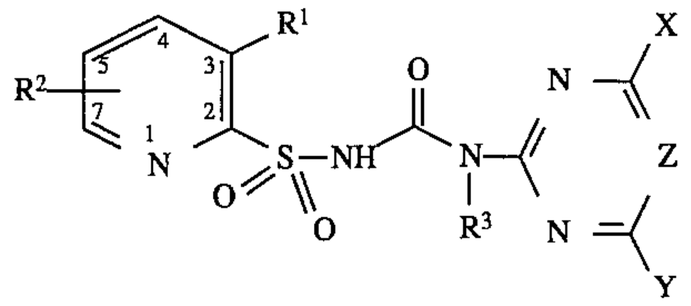
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
1	I	H	H	OCH_3	OCH_3	CH	161–162 (D.)
2	"	H	CH_3	OCH_3	OCH_3	CH	
3	"	H	CH_3	OCH_3	CH_3	N	
4	"	H	H	CH_3	CH_3	CH	186 (D.)
5	"	H	H	OCH_3	CH_3	CH	177–178
6	"	H	H	CH_3	CH_3	N	
7	"	H	H	OCH_3	CH_3	N	156–157 (dec.)
8	"	H	H	OCH_3	OCH_3	N	155 (dec.)
9	"	H	H	OCH_3	Cl	CH	
10	"	H	H	OCF_2H	CH_3	CH	
11	"	H	H	OCF_2H	OCF_2H	CH	
12	"	H	H	OCH_3	Br	CH	
13	"	H	H	OCH_3	OC_2H_5	CH	
14	"	H	H	OCH_3	SCH_3	CH	
15	"	H	H	OCH_3	OC_2H_5	N	
16	"	H	H	OCH_3	OC_3H_7	CH	
17	"	H	H	OCH_3	Cl	N	
18	"	H	H	Cl	OC_2H_5	CH	
19	"	H	H	OC_2H_5	OC_2H_5	CH	
20	"	H	H	C_2H_5	OCH_3	CH	
21	"	H	H	CF_3	OCH_3	CH	
22	"	H	H	OCH_2CF_3	CH_3	CH	
23	"	H	H	OCH_2CF_3	OCH_3	CH	
24	"	H	H	OCH_2CF_3	OCH_2CF_3	CH	
25	"	H	H	OCH_2CF_3	OCH_3	N	
26	"	H	H	OCH_3	$CH(OCH_3)_2$	CH	
27	"	4-CH_3	H	OCH_3	OCH_3	CH	
28	"	"	H	OCH_3	CH_3	CH	
29	"	"	H	OCH_3	Cl	CH	
30	"	"	H	CH_3	CH_3	CH	
31	"	"	H	OCH_3	OCH_3	N	
32	"	"	H	OCH_3	CH_3	N	
33	"	"	H	OC_2H_5	$NHCH_3$	N	
34	"	"	CH_3	OCH_3	CH_3	N	
35	"	5-CH_3	H	OCH_3	OCH_3	CH	
36	"	"	H	OCH_3	CH_3	CH	
37	"	"	H	OCH_3	Cl	CH	

TABLE 1-continued



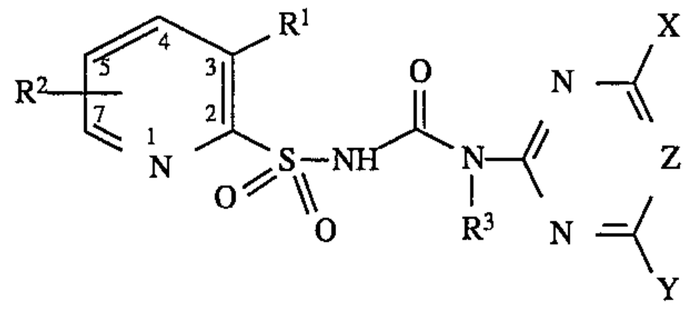
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
38	"	"	H	CH_3	CH_3	CH	
39	"	"	H	OCH_3	OCH_3	N	
40	"	"	H	OCH_3	CH_3	N	
41	"	"	H	OC_2H_5	$NHCH_3$	N	
42	"	"	CH_3	OCH_3	CH_3	N	
43	"	6-CH_3	H	OCH_3	OCH_3	CH	
44	"	"	H	OCH_3	CH_3	CH	
45	"	"	H	OCH_3	Cl	CH	
46	"	"	H	CH_3	CH_3	CH	
47	"	"	H	OCH_3	OCH_3	N	
48	"	"	H	OCH_3	CH_3	N	
49	"	"	H	OC_2H_5	$NHCH_3$	N	
50	"	"	CH_3	OCH_3	CH_3	N	
51	"	4-Cl	H	OCH_3	OCH_3	CH	
52	"	"	H	OCH_3	CH_3	CH	
53	"	"	H	OCH_3	Cl	CH	
54	"	"	H	CH_3	CH_3	CH	
55	"	"	H	OCH_3	OCH_3	N	
56	"	"	H	OCH_3	CH_3	N	
57	"	"	H	OC_2H_5	$NHCH_3$	N	
58	"	"	CH_3	OCH_3	CH_3	N	
59	"	5-Cl	H	OCH_3	OCH_3	CH	
60	"	"	H	OCH_3	CH_3	CH	
61	"	"	H	OCH_3	Cl	CH	
62	"	"	H	CH_3	CH_3	CH	
63	"	"	H	OCH_3	OCH_3	N	
64	"	"	H	OCH_3	CH_3	N	
65	"	"	H	OC_2H_5	$NHCH_3$	N	
66	"	"	CH_3	OCH_3	CH_3	N	
67	"	6-Cl	H	OCH_3	OCH_3	CH	
68	"	"	H	OCH_3	CH_3	CH	
69	"	"	H	OCH_3	Cl	CH	
70	"	"	H	CH_3	CH_3	CH	
71	"	"	H	OCH_3	OCH_3	N	
72	"	"	H	OCH_3	CH_3	N	
73	"	"	H	OC_2H_5	$NHCH_3$	N	
74	"	"	CH_3	OCH_3	CH_3	N	
75	"	4-CF_3	H	OCH_3	OCH_3	CH	
76	"	"	H	OCH_3	CH_3	CH	
77	"	"	H	OCH_3	Cl	CH	
78	"	"	H	CH_3	CH_3	CH	
79	"	"	H	OCH_3	OCH_3	N	
80	"	"	H	OCH_3	CH_3	N	
81	"	4-F	H	OC_2H_5	$NHCH_3$	N	
82	"	"	CH_3	OCH_3	CH_3	N	
83	"	5-CF_3	H	OCH_3	OCH_3	CH	
84	"	"	H	OCH_3	CH_3	CH	
85	"	"	H	OCH_3	Cl	CH	
86	"	"	H	CH_3	CH_3	CH	
87	"	"	H	OCH_3	OCH_3	N	
88	"	"	H	OCH_3	CH_3	N	
89	"	5-F	H	OC_2H_5	$NHCH_3$	N	
90	"	"	CH_3	OCH_3	CH_3	N	
91	"	6-F	H	OCH_3	OCH_3	CH	
92	"	"	H	OCH_3	CH_3	CH	
93	"	"	H	OCH_3	Cl	CH	
94	"	"	H	CH_3	CH_3	CH	
95	"	"	H	OCH_3	OCH_3	N	
96	"	"	H	OCH_3	CH_3	N	
97	"	"	H	OC_2H_5	$NHCH_3$	N	
98	"	"	CH_3	OCH_3	CH_3	N	
99	"	4-OCH_3	H	OCH_3	OCH_3	CH	
100	"	"	H	OCH_3	CH_3	CH	
101	"	"	H	OCH_3	Cl	CH	
102	"	"	H	CH_3	CH_3	CH	
103	"	"	H	OCH_3	OCH_3	N	
104	"	"	H	OCH_3	CH_3	N	
105	"	"	H	OC_2H_5	$NHCH_3$	N	

TABLE 1-continued



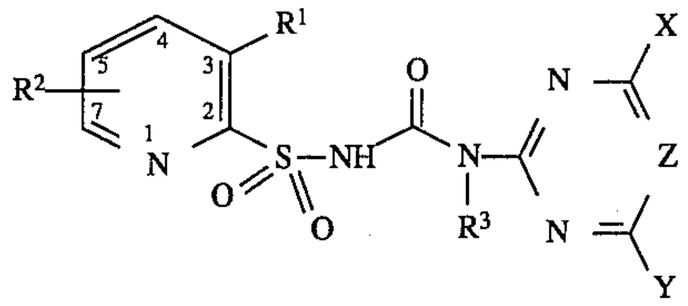
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
106	"	"	CH_3	OCH_3	CH_3	N	
107	"	5-OCH_3	H	OCH_3	OCH_3	CH	
108	"	"	H	OCH_3	CH_3	CH	
109	"	"	H	OCH_3	Cl	CH	
110	"	"	H	CH_3	CH_3	CH	
111	"	"	H	OCH_3	OCH_3	N	
112	"	"	H	OCH_3	CH_3	N	
113	"	"	H	OC_2H_5	$NHCH_3$	N	
114	"	"	CH_3	OCH_3	CH_3	N	
115	"	6-OCH_3	H	OCH_3	OCH_3	CH	
116	"	"	H	OCH_3	CH_3	CH	
117	"	"	H	OCH_3	Cl	CH	
118	"	"	H	CH_3	CH_3	CH	
119	"	"	H	OCH_3	OCH_3	N	
120	"	"	H	OCH_3	CH_3	N	
121	"	"	H	OC_2H_5	$NHCH_3$	N	
122	"	"	CH_3	OCH_3	CH_3	N	
123	"	6-C_2H_5	H	OCH_3	OCH_3	CH	
124	"	6-C_4H_9	H	OCH_3	OCH_3	CH	
126	"	6-OC_2H_5	H	OCH_3	OCH_3	CH	
127	"	6-OCH_2CF_3	H	OCH_3	OCH_3	CH	
128	"	6-SCH_3	H	OCH_3	OCH_3	CH	
129	"	6-SO_2CH_3	H	OCH_3	OCH_3	CH	
130	"	6-NO_2	H	OCH_3	OCH_3	CH	
131	"	6-CO_2CH_3	H	OCH_3	OCH_3	CH	
132	"	6-Br	H	OCH_3	OCH_3	CH	
133	"	6-CF_3	H	OCH_3	OCH_3	CH	
134	"	6-OCF_3	R	OCH_3	OCH_3	CH	
135	"	6-OCF_2H	H	OCH_3	OCH_3	CH	
136	$-OSO_2N(CH_3)_2$	H	H	OCH_3	OCH_3	CH	155–157
137	"	H	CH_3	OCH_3	OCH_3	CH	
138	"	H	CH_3	OCH_3	CH_3	N	
139	"	H	H	CH_3	CH_3	CH	
140	"	H	H	OCH_3	CH_3	CH	
141	"	H	H	CH_3	CH_3	N	
142	"	H	H	OCH_3	CH_3	N	137–138 (dec.)
143	"	H	H	OCH_3	OCH_3	N	
144	"	H	H	OCH_3	Cl	CH	
145	"	H	H	OCF_2H	CH_3	CH	
145	"	H	H	OCF_2H	OCF_2H	CH	
147	"	H	H	OCH_3	Br	CH	
148	"	H	H	OCH_3	OC_2H_5	CH	
149	"	H	H	OCH_3	SCH_3	CH	
150	"	H	H	OCH_3	OC_2H_5	N	
151	"	H	H	OCH_3	OC_2H_7	CH	
152	"	H	H	OCH_3	Cl	N	
153	"	H	H	Cl	OC_2H_5	CH	
154	"	H	H	OC_2H_5	OC_2H_5	CH	
155	"	H	H	C_2H_5	OCH_3	CH	
156	"	H	H	CF_3	OCH_3	CH	
157	"	H	H	OCH_2CF_3	CH_3	CH	
158	"	H	H	OCH_2CF_3	OCH_3	CH	
159	"	H	H	OCH_2CF_2	OCH_2CF_3	CH	
160	"	H	H	OCH_2CF_3	OCH_3	N	
161	"	H	H	OCH_3	$CH(OCH_2)_2$	CH	
162	"	4-CH_3	H	OCH_3	OCH_3	CH	
163	"	"	H	OCH_3	CH_3	CH	
164	"	"	H	OCH_3	Cl	CH	
165	"	"	H	CH_3	CH_3	CH	
166	"	"	H	OCH_3	OCH_3	N	
167	"	"	H	OCH_3	CH_3	N	
168	"	"	H	OC_2H_5	$NHCH_3$	N	
169	"	"	CH_3	OCH_3	CH_3	N	
170	"	5-CH_3	H	OCH_3	OCH_3	CH	
171	"	"	H	OCH_3	CH_3	CH	
172	"	"	H	OCH_3	Cl	CH	
173	"	"	CH_3	CH_3	CH		
174	"	"	H	OCH_3	OCH_3	N	

TABLE 1-continued



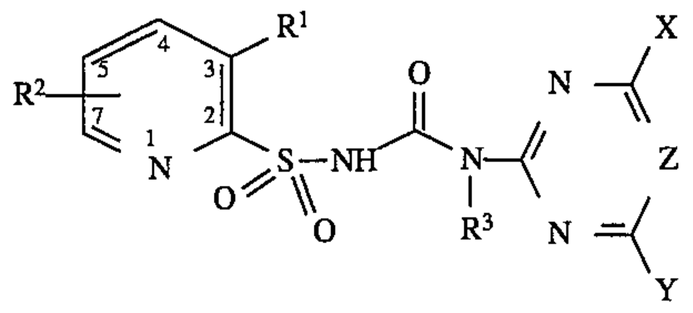
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
175	"	"	H	OCH_3	CH_3	N	
176	"	"	H	OC_2H_5	$NHCH_3$	N	
177	"	"	CH_3	OCH_3	CH_3	N	
178	"	6-CH_3	H	OCH_3	OCH_3	CH	
179	"	"	H	OCH_3	CH_3	CH	
180	"	"	H	OCH_3	Cl	CH	
181	"	"	H	CH_3	CH_3	CH	
182	"	"	H	OCH_3	OCH_3	N	
183	"	"	H	OCH_3	CH_3	N	
184	"	"	H	OC_2H_5	$NHCH_3$	N	
185	"	"	CH_3	OCH_3	CH_3	N	
186	"	4-Cl	H	OCH_3	OCH_3	CH	
187	"	"	H	OCH_3	CH_3	CH	
188	"	"	H	OCH_3	Cl	CH	
189	"	"	H	CH_3	CH_3	CH	
190	"	"	H	OCH_3	OCH_3	N	
191	"	"	H	OCH_3	CH_3	N	
192	"	"	H	OC_2H_5	$NHCH_3$	N	
193	"	"	CH_3	OCH_3	CH_3	N	
194	"	5-Cl	H	OCH_3	OCH_3	CH	
195	"	"	H	OCH_3	CH_3	CH	
196	"	"	H	OCH_3	Cl	CH	
197	"	"	H	CH_3	CH_3	CH	
198	"	"	H	OCH_3	OCH_3	N	
199	"	"	H	OCH_3	CH_3	N	
200	"	"	H	OC_2H_5	$NHCH_3$	N	
201	"	"	CH_3	OCH_3	CH_3	N	
202	"	6-Cl	H	OCH_3	OCH_3	CH	
203	"	"	H	OCH_3	CH_3	CH	
204	"	"	H	OCH_3	Cl	CH	
205	"	"	H	CH_3	CH_3	CH	
206	"	"	H	OCH_3	OCH_3	N	
207	"	"	H	OCH_3	CH_3	N	
208	"	"	H	OC_2H_5	$NHCH_3$	N	
209	"	"	CH_3	OCH_3	CH_3	N	
210	"	4-F	H	OCH_3	OCH_3	CH	
211	"	"	H	OCH_3	CH_3	CH	
212	"	"	H	OCH_3	Cl	CH	
213	"	"	H	CH_3	CH_3	CH	
214	"	"	H	OCH_3	OCH_3	N	
215	"	"	H	OCH_3	CH_3	N	
216	"	"	H	OC_2H_5	$NHCH_3$	N	
217	"	"	CH_3	OCH_3	CH_3	N	
218	"	5-F	H	OCH_3	OCH_3	CH	
219	"	"	H	OCH_3	CH_3	CH	
220	"	"	H	OCH_3	Cl	CH	
221	"	"	H	CH_3	CH_3	CH	
222	"	"	H	OCH_3	OCH_3	N	
223	"	"	H	OCH_3	CH_3	N	
224	"	"	H	OC_2H_5	$NHCH_3$	N	
225	"	"	CH_3	OCH_3	CH_3	N	
226	"	6-F	H	OCH_3	OCH_3	CH	
227	"	"	H	OCH_3	CH_3	CH	
228	"	"	H	OCH_3	Cl	CH	
229	"	"	H	CH_3	CH_3	CH	
230	"	"	H	OCH_3	OCH_3	N	
231	"	"	H	OCH_3	CH_3	N	
232	"	"	H	OC_2H_5	$NHCH_3$	N	
233	"	"	CH_3	OCH_3	CH_3	N	
234	"	4-OCH_3	H	OCH_3	OCH_3	CH	
235	"	"	H	OCH_3	CH_3	CH	
236	"	"	H	OCH_3	Cl	CH	
237	"	"	H	CH_3	CH_3	CH	
238	"	"	H	OCH_3	OCH_3	N	
239	"	"	H	OCH_3	CH_3	N	
240	"	"	H	OC_2H_5	$NHCH_3$	N	
241	"	"	CH_3	OCH_3	CH_3	N	
242	"	5-OCH_3	H	OCH_3	OCH_3	CH	

TABLE 1-continued



Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
243	"	"	H	OCH_3	CH_3	CH	
244	"	"	H	OCH_3	Cl	CH	
245	"	"	H	CH_3	CH_3	CH	
246	"	"	H	OCH_3	OCH_3	N	
247	"	"	H	OCH_3	CH_3	N	
248	"	"	H	OC_2H_5	$NHCH_3$	N	
249	"	"	CH_3	OCH_3	CH_3	N	
250	"	6-OCH_3	H	OCH_3	OCH_3	CH	
251	"	"	H	OCH_3	CH_3	CH	
252	"	"	H	OCH_3	Cl	CH	
253	"	"	H	CH_3	CH_3	CH	
254	"	"	H	OCH_3	OCH_3	N	
255	"	"	H	OCH_3	CH_3	N	
256	"	"	H	OC_2H_5	$NHCH_3$	N	
257	"	"	CH_3	OCH_3	CH_3	N	
258	"	6-C_2H_5	H	OCH_3	OCH_3	CH	
259	"	6-C_4H_9	H	OCH_3	OCH_3	CH	
260	"	6-OC_2H_5	H	OCH_3	OCH_3	CH	
261	"	6-OCH_2CF_3	H	OCH_3	OCH_3	CH	
262	"	6-SCH_3	H	OCH_3	OCH_3	CH	
263	"	6-SO_2CH_3	H	OCH_3	OCH_3	CH	
264	"	6-NO_2	H	OCH_3	OCH_3	CH	
265	"	6-CO_2CH_3	H	OCH_3	OCH_3	CH	
266	"	6-Br	H	OCH_3	OCH_3	CH	
267	"	6-CF_3	H	OCH_3	OCH_3	CH	
268	"	6-OCF_3	H	OCH_3	OCH_3	CH	
269	"	6-OCF_2H	H	OCH_3	OCH_3	CH	
270	$-OSO_2N(CH_3)(C_2H_5)$	H	H	OCH_3	OCH_3	CH	
271	"	H	H	OCH_3	CH_3	CH	
272	"	H	H	OCH_3	Cl	CH	
273	"	H	H	CH_3	CH_3	CH	
274	"	H	H	OCH_3	OCH_3	N	
275	"	H	H	OCH_3	CH_3	N	
276	"	H	H	OC_2H_5	$NHCH_3$	N	
277	"	H	CH_3	OCH_3	CH_3	N	
278	"	4-CH_3	H	OCH_3	OCH_3	CH	
279	"	4-Cl	H	OCH_3	OCH_3	CH	
280	"	6-CH_3	H	OCH_3	OCH_3	CH	
281	"	6-OCH_3	H	OCH_3	OCH_3	CH	
282	"	6-Cl	H	OCH_3	OCH_3	CH	
283	$-OSO_2N(CH_3)OCH_3$	H	H	OCH_3	OCH_3	CH	
284	$-OSO_2N(CH_3)(C_2H_5)$	H	H	OCH_3	OCH_3	CH	
285	"	H	H	OCH_3	CH_3	CH	
286	"	H	H	OCH_3	Cl	CH	
287	"	H	H	CH_3	CH_3	CH	
288	"	H	H	OCH_3	OCH_3	N	
289	"	H	H	OCH_3	CH_3	N	
290	"	H	H	OC_2H_5	$NHCH_3$	N	
291	"	H	CH_3	OCH_3	CH_3	N	
292	"	4-CH_3	H	OCH_3	OCH_3	CH	
293	"	4-Cl	H	OCH_3	OCH_3	CH	
294	"	6-CH_3	H	OCH_3	OCH_3	CH	
295	"	6-OCH_3	H	OCH_3	OCH_3	CH	
296	"	6-Cl	H	OCH_3	OCH_3	CH	
297	$-OSO_2N(Allyl)_2$	H	H	OCH_3	OCH_3	CH	

TABLE 1-continued



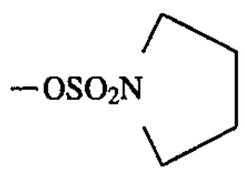
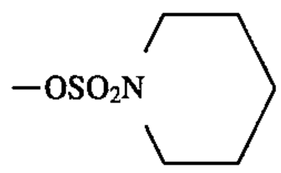
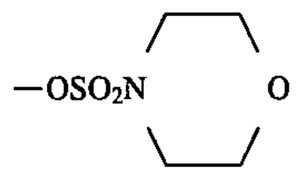
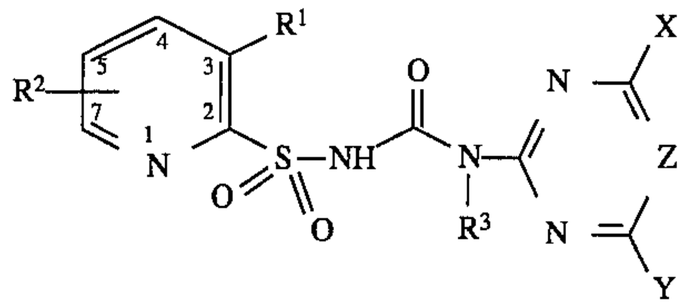
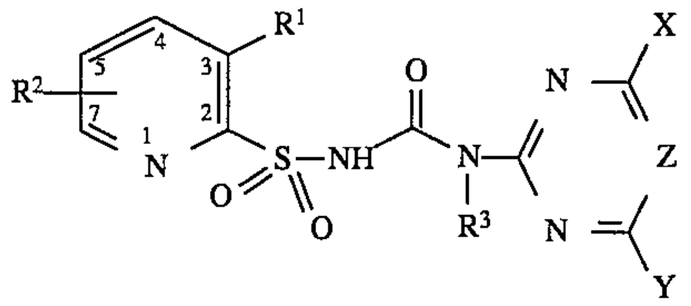
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
298	$-OSO_2N(C_2H_5)_2$	H	H	OCH_3	OCH_3	CH	157–158
299	"	H	H	OCH_3	CH_3	CH	151–153 (D.)
300	"	H	H	OCH_3	Cl	CH	
301	"	H	H	CH_3	CH_3	CH	159–160 (D.)
302	"	H	H	OCH_3	OCH_3	N	
303	"	H	H	OCH_3	CH_3	N	146–149 (D.)
304	"	H	H	OC_2H_5	$NHCH_3$	N	
305	"	H	CH_3	OCH_3	CH_3	N	
306	"	4-CH_3	H	OCH_3	OCH_3	CH	
307	"	4-Cl	H	OCH_3	OCH_3	CH	
308	"	6-CH_3	H	OCH_3	OCH_3	CH	
309	"	6-OCH_3	H	OCH_3	OCH_3	CH	
310	"	6-Cl	H	OCH_3	OCH_3	CH	
311	"	6-F	H	OCH_3	OCH_3	CH	
312		H	H	OCH_3	OCH_3	CH	158–159
313	"	H	H	OCH_3	CH_3	CH	170–171
314	"	H	H	OCH_3	Cl	CH	
315	"	H	H	CH_3	CH_3	CH	169–170
316	"	H	H	OCH_3	OCH_3	N	
317	"	H	H	OCH_3	CH_3	N	155
318	"	H	H	OC_2H_5	$NHCH_3$	N	
319	"	H	CH_3	OCH_3	CH_3	N	
320	"	4-CH_3	H	OCH_3	OCH_3	CH	
321	"	4-Cl	H	OCH_3	OCH_3	CH	
322	"	6-CH_3	H	OCH_3	OCH_3	CH	
323	"	6-OCH_3	H	OCH_3	OCH_3	CH	
324	"	6-Cl	H	OCH_3	OCH_3	CH	
325	"	6-F	R	OCH_3	OCH_3	CH	
326		H	H	OCH_3	OCH_3	CH	173–174 (D.)
327	"	H	H	OCH_3	CH_3	CH	
328	"	H	H	OCH_3	Cl	CH	
329	"	H	H	CH_3	CH_3	CH	185–186 (D.)
330	"	H	H	OCH_3	OCH_3	N	
331	"	H	H	OCH_3	CH_3	N	
332	"	H	H	OC_2H_5	$NHCH_3$	N	
333	"	H	CH_3	OCH_3	CH_3	N	
334	"	4-CH_3	H	OCH_3	OCH_3	CH	
335	"	4-Cl	H	OCH_3	OCH_3	CH	
336	"	6-CH_3	H	OCH_3	OCH_3	CH	
337	"	6-OCH_3	H	OCH_3	OCH_3	CH	
338	"	6-Cl	H	OCH_3	OCH_3	CH	
339	"	6-F	H	OCH_3	OCH_3	CH	
340		H	H	OCH_3	OCH_3	CH	141–142 (D.)
341	"	H	H	OCH_3	CH_3	CH	
342	"	H	H	OCH_3	Cl	CH	
343	"	H	H	CH_3	CH_3	CH	
344	"	H	H	OCH_3	OCH_3	N	
345	"	H	H	OCH_3	CH_3	N	

TABLE 1-continued



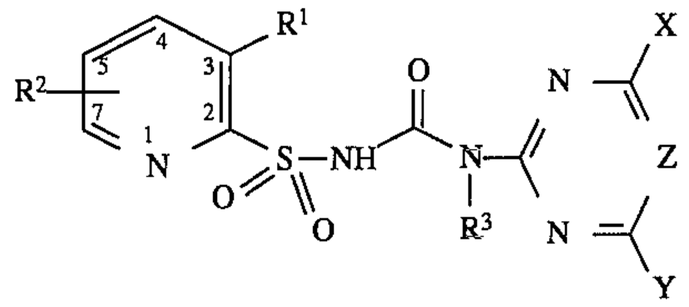
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
346	"	H	H	OC_2H_5	$NHCH_3$	N	
347	"	H	CH_3	OCH_3	CH_3	N	
348	4-CH_3	H	OCH_3	OCH_3	CH		
349	"	4-Cl	H	OCH_3	OCH_3	CH	
350	"	6-CH_3	H	OCH_3	OCH_3	CH	
351	"	6-OCH_3	H	OCH_3	OCH_3	CH	
352	"	6-Cl	H	OCH_3	OCH_3	CH	
353	"	6-F	H	OCH_3	OCH_3	CH	
354	$-NHSO_2CH_3$	H	H	OCH_3	OCH_3	CH	191–192 (D.)
355	"	H	H	OCH_3	CH_3	CH	
356	"	H	H	OCH_3	Cl	CH	
357	"	H	H	CH_3	CH_3	CH	
358	"	H	H	OCH_3	OCH_3	N	
359	"	H	H	OCH_3	CH_3	N	
360	"	H	H	OC_2H_5	$NHCH_3$	N	
361	"	H	CH_3	OCH_3	CH_3	N	
362	"	4-CH_3	H	OCH_3	OCH_3	CH	
363	"	4-Cl	H	OCH_3	OCH_3	CH	
364	"	6-CH_3	H	OCH_3	OCH_3	CH	
365	"	6-OCH_3	H	OCH_3	OCH_3	CH	
366	"	6-Cl	H	OCH_3	OCH_3	CH	
367	"	6-F	H	OCH_3	OCH_3	CH	
368	$-NHSO_2C_2H_5$	H	H	OCH_3	OCH_3	CH	
369	"	H	H	OCH_3	CH_3	CH	
370	"	H	H	OCH_3	Cl	CH	
371	"	H	H	CH_3	CH_3	CH	
372	"	H	H	OCH_3	OCH_3	N	
373	"	H	H	OCH_3	CH_3	N	
374	"	H	H	OC_2H_5	$NHCH_3$	N	
375	"	H	CH_3	OCH_3	CH_3	N	
376	"	4-CH_3	H	OCH_3	OCH_3	CH	
377	"	4-Cl	H	OCH_3	OCH_3	CH	
378	"	6-CH_3	H	OCH_3	OCH_3	CH	
379	"	6-OCH_3	H	OCH_3	OCH_3	CH	
380	"	6-Cl	H	OCH_3	OCH_3	CH	
381	"	6-F	H	OCH_3	OCH_3	CH	
382	$-NHSO_2C_3H_7$	H	H	OCH_3	OCH_3	CH	
383	"	H	H	OCH_3	CH_3	CH	
384	"	H	H	OCH_3	Cl	CH	
385	"	H	H	CH_3	CH_3	CH	
386	"	H	H	OCH_3	OCH_3	N	
387	"	H	H	OCH_3	CH_3	N	
388	"	H	H	OC_2H_5	$NHCH_3$	N	
389	"	H	CH_3	OCH_3	CH_3	N	
390	"	4-CH_3	H	OCH_3	OCH_3	CH	
391	"	4-Cl	H	OCH_3	OCH_3	CH	
392	"	6-CH_3	H	OCH_3	OCH_3	CH	
393	"	6-OCH_3	H	OCH_3	OCH_3	CH	
394	"	6-Cl	H	OCH_3	OCH_3	CH	
395	"	6-F	H	OCH_3	OCH_3	CH	
396	$-NHSO_2C_8H_5$	H	H	OCH_3	OCH_3	CH	
397	"	H	H	OCH_3	CH_3	CH	
398	"	H	H	OCH_3	Cl	CH	
399	"	H	H	CH_3	CH_3	CH	
401	"	H	H	OCH_3	OCH_3	N	
402	"	H	H	OCH_3	CH_3	N	
403	"	H	H	OC_2H_5	$NHCH_3$	N	
404	"	H	CH_3	OCH_3	CH_3	N	
405	"	4-CH_3	H	OCH_3	OCH_3	CH	
406	"	4-Cl	H	OCH_3	OCH_3	CH	
407	"	6-CH_3	H	OCH_3	OCH_3	CH	
408	"	6-OCH_3	H	OCH_3	OCH_3	CH	
409	"	6-Cl	H	OCH_3	OCH_3	CH	
410	"	6-F	H	OCH_3	OCH_3	CH	
411	$-N(SO_2CH_3)_2$	H	H	OCH_3	OCH_3	CH	219–220 (D.)
412	"	H	H	OCH_3	CH_3	CH	
413	"	H	H	OCH_3	Cl	CH	
414	"	H	H	CH_3	CH_3	CH	

TABLE 1-continued



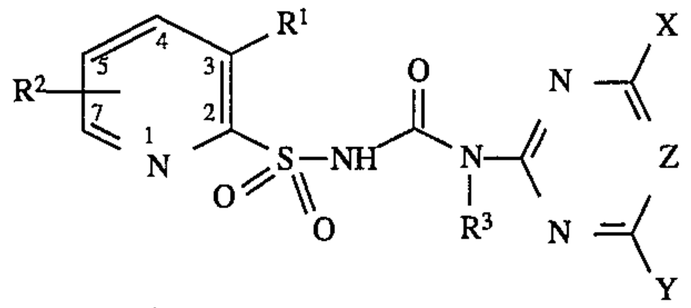
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
415	"	H	H	OCH_3	OCH_3	N	
416	"	H	H	OCH_3	CH_3	N	
417	"	H	H	OC_2H_5	$NHCH_3$	N	
418	"	H	CH_3	OCH_3	CH_3	N	
419	"	4-CH_3	H	OCH_3	OCH_3	CH	
420	"	4-Cl	H	OCH_3	OCH_3	CH	
421	"	6-CH_3	H	OCH_3	OCH_3	CH	
422	"	6-OCH_3	H	OCH_3	OCH_3	CH	
423	"	6-Cl	H	OCH_3	OCH_3	CH	
424	"	6-F	H	OCH_3	OCH_3	CH	
425	$-N(SO_2C_2H_5)_2$	H	H	OCH_3	OCH_3	CH	
426	"	H	H	OCH_3	CH_3	CH	
427	"	H	H	OCH_3	Cl	CH	
428	"	H	H	CH_3	CH_3	CH	
429	"	H	H	OCH_3	OCH_3	N	
430	"	H	H	OCH_3	CH_3	N	
431	"	H	H	OC_2H_5	$NHCH_3$	N	
432	"	H	CH_3	OCH_3	CH_3	N	
433	"	4-CH_3	H	OCH_3	OCH_3	CH	
434	"	4-Cl	H	OCH_3	OCH_3	CH	
435	"	6-CH_3	H	OCH_3	OCH_3	CH	
436	"	6-OCH_3	H	OCH_3	OCH_3	CH	
437	"	6-Cl	H	OCH_3	OCH_3	CH	
438	"	6-F	H	OCH_3	OCH_3	CH	
439	$-N(CH_3)SO_2CH_3$	H	H	OCH_3	OCH_3	CH	177–178
440	"	H	CH_3	OCH_3	OCH_3	CH	152–153
441	"	H	CH_3	OCH_3	CH_3	N	
442	"	H	H	CH_3	CH_3	CH	185–186 (D.)
443	"	H	H	OCH_3	CH_3	CH	169–170 (D.)
444	"	H	H	CH_3	OC_2H_5	CH	
445	"	H	H	OCH_3	CH_3	N	158–159 (D.)
446	"	H	H	OCH_3	OCH_3	N	173–174 (D.)
447	"	H	H	OCH_3	Cl	CH	167–169
448	"	H	H	OCF_2H	CH_3	CH	
449	"	H	H	OCF_2H	OCF_2H	CH	
450	"	H	H	OCH_3	Br	CH	
451	"	H	H	OCH_3	OC_2H_5	CH	
452	"	H	H	OCH_3	SCH_3	CH	
453	"	H	H	OCH_3	OC_2H_5	N	
454	"	H	H	OCH_3	OC_3H_7	CH	
455	"	H	H	CH_3	Cl	CH	168–169 (D.)
456	"	H	H	Cl	OC_2H_5	CH	
457	"	H	H	OC_2H_5	OC_2H_5	CH	
458	"	H	H	C_2H_5	OCH_3	CH	
459	"	H	H	CF_3	OCH_3	CH	
460	"	H	H	OCH_2CF_3	CH_3	CH	
461	"	H	H	OCH_2CF_3	OCH_3	CH	
462	"	H	H	OC_2CF_3	OC_2CF_3	CH	
463	"	H	H	OC_2CF_3	OCH_3	N	
464	"	H	H	OCH_3	$CH(OCH_3)_2$	CH	
465	"	4-CH_3	H	OCH_3	OCH_3	CH	
466	"	"	H	OCH_3	CH_3	CH	
467	"	"	H	OCH_3	Cl	CH	
468	"	"	H	CH_3	CH_3	CH	
469	"	"	H	OCH_3	OCH_3	N	
470	"	"	H	OCH_3	CH_3	N	
471	"	"	H	OC_2H_5	$NHCH_3$	N	
472	"	"	CH_3	OCH_3	OCH_3	CH	
473	"	5-CH_3	H	OCH_3	OCH_3	CH	
474	"	"	H	OCH_3	CH_3	CH	
475	"	"	H	OCH_3	Cl	CH	
476	"	"	H	CH_3	CH_3	CH	
477	"	"	H	OCH_3	OCH_3	N	
478	"	"	H	OCH_3	CH_3	N	
479	"	"	H	OC_2H_5	$NHCH_3$	N	
480	"	"	CH_3	OCH_3	OCH_3	CH	
481	"	6-CH_3	H	OCH_3	OCH_3	CH	185
482	"	"	H	OCH_3	CH_3	CH	

TABLE 1-continued



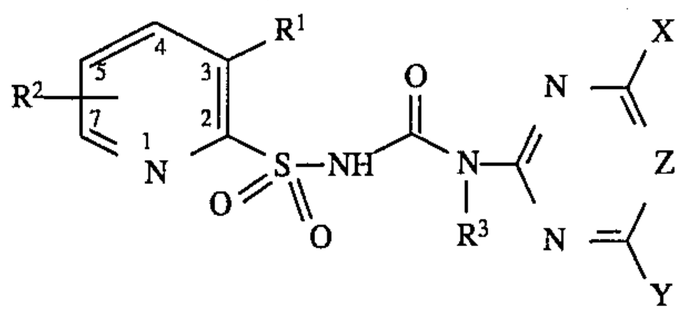
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
483	"	"	H	OCH_3	Cl	CH	
484	"	"	H	CH_3	CH_3	CH	
485	"	"	H	OCH_3	OCH_3	N	
486	"	"	H	OCH_3	CH_3	N	
487	"	"	H	OC_2H_5	$NHCH_3$	N	
488	"	"	CH_3	OCH_3	OCH_3	CH	
489	"	4-Cl	H	OCH_3	OCH_3	CH	
490	"	"	H	OCH_3	CH_3	CH	
491	"	"	H	OCH_3	Cl	CH	
492	"	"	H	CH_3	CH_3	CH	
493	"	"	H	OCH_3	OCH_3	N	
494	"	"	H	OCH_3	CH_3	N	
495	"	"	H	OC_2H_5	$NHCH_3$	N	
496	"	"	CH_3	OCH_3	OCH_3	CH	
497	"	5-Cl	H	OCH_3	OCH_3	CH	
498	"	"	H	OCH_3	CH_3	CH	
499	"	"	H	OCH_3	Cl	CH	
500	"	"	H	CH_3	CH_3	CH	
501	"	"	H	OCH_3	OCH_3	N	
502	"	"	H	OCH_3	CH_3	N	
503	"	"	H	OC_2H_5	$NHCH_3$	N	
504	"	"	CH_3	OCH_3	OCH_3	CH	
505	"	6-Cl	H	OCH_3	OCH_3	CH	
506	"	"	H	OCH_3	CH_3	CH	
507	"	"	H	OCH_3	Cl	CH	
508	"	"	H	CH_3	CH_3	CH	
509	"	"	H	OCH_3	OCH_3	N	
510	"	"	H	OCH_3	CH_3	N	
511	"	"	H	OC_2H_5	$NHCH_3$	N	
512	"	"	CH_3	OCH_3	OCH_3	CH	
513	"	4-CF_3	H	OCH_3	OCH_3	CH	
514	"	"	H	OCH_3	CH_3	CH	
515	"	"	H	OCH_3	Cl	CH	
516	"	"	H	CH_3	CH_3	CH	
517	"	"	H	OCH_3	OCH_3	N	
518	"	"	H	OCH_3	CH_3	N	
519	"	4-F	H	OC_2H_5	$NHCH_3$	N	
520	"	"	CH_3	OCH_3	OCH_3	CH	
521	"	5-CF_3	H	OCH_3	OCH_3	CH	
522	"	"	H	OCH_3	CH_3	CH	
523	"	"	H	OCH_3	Cl	CH	
524	"	"	H	CH_3	CH_3	CH	
525	"	"	H	OCH_3	OCH_3	N	
526	"	"	H	OCH_3	CH_3	N	
527	"	5-F	H	OC_2H_5	$NHCH_3$	N	
528	"	"	CH_3	OCH_3	OCH_3	CH	
529	"	6-F	H	OCH_3	OCH_3	CH	
530	"	"	H	OCH_3	CH_3	CH	
531	"	"	H	OCH_3	Cl	CH	
532	"	"	H	CH_3	CH_3	CH	
533	"	"	H	OCH_3	OCH_3	N	
534	"	"	H	OCH_3	CH_3	N	
535	"	"	H	OC_2H_5	$NHCH_3$	N	
536	"	"	CH_3	OCH_3	OCH_3	CH	
537	"	4-OCH_3	H	OCH_3	OCH_3	CH	
538	"	"	H	OCH_3	CH_3	CH	
539	"	"	H	OCH_3	Cl	CH	
540	"	"	H	CH_3	CH_3	CH	
541	"	"	OCH_3	OCH_3	N		
542	"	"	H	OCH_3	CH_3	N	
543	"	"	H	OC_2H_5	$NHCH_3$	N	
544	"	"	CH_3	OCH_3	OCH_3	CH	
545	"	5-OCH_3	H	OCH_3	OCH_3	CH	
546	"	"	H	OCH_3	CH_3	CH	
547	"	"	H	OCH_3	Cl	CH	
548	"	"	H	CH_3	CH_3	CH	
549	"	"	H	OCH_3	OCH_3	N	
550	"	"	H	OCH_3	CH_3	N	

TABLE 1-continued



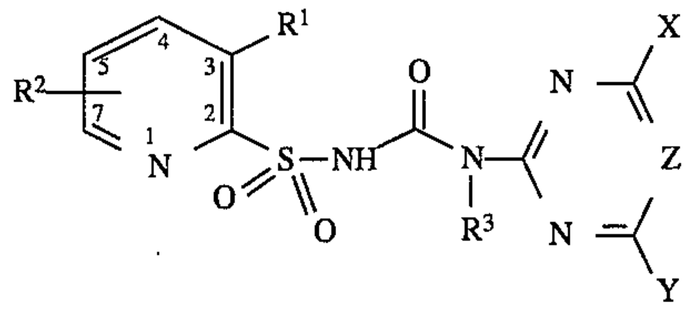
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
551	"	"	H	OC_2H_5	$NHCH_3$	N	
552	"	"	CH_3	OCH_3	OCH_3	CH	
553	"	6-OCH_3	H	OCH_3	OCH_3	CH	
554	"	"	H	OCH_3	CH_3	CH	
555	"	"	H	OCH_3	Cl	CH	
556	"	"	H	CH_3	CH_3	CH	
557	"	"	H	OCH_3	OCH_3	N	
558	"	"	H	OCH_3	CH_3	N	
559	"	"	H	OCH_2H_5	$NHCH_3$	N	
560	"	"	CH_3	OCH_3	OCH_3	CH	
561	"	6-C_2H_5	H	OCH_3	OCH_3	CH	
562	"	6-C_4H_9	H	OCH_3	OCH_3	CH	
563	"	6-OC_2H_5	R	OCH_3	OCH_3	CH	
564	"	6-OC_2CF_3	H	OCH_3	OCH_3	CH	
565	"	6-SCH_3	H	OCH_3	OCH_3	CH	
566	"	6-SO_2CH_3	H	OCH_3	OCH_3	CH	
567	"	6-NO_2	H	OCH_3	OCH_3	CH	
568	"	6-CO_2CH_3	H	OCH_3	OCH_3	CH	
569	"	6-Br	H	OCH_3	OCH_3	CH	
570	"	6-CF_3	H	OCH_3	OCH_3	CH	
571	"	6-OCF_3	H	OCH_3	OCH_3	CH	
572	"	6-OCF_2H	H	OCH_3	OCH_3	CH	
573	—N(Et)SO_2CH_3	H	H	OCH_3	OCH_3	CH	188 (D.)
574	"	H	H	OCH_3	CH_3	CH	
575	"	H	H	OCH_3	Cl	CH	
576	"	H	H	CH_3	CH_3	CH	
577	"	H	H	OCH_3	OCH_3	N	
578	"	H	H	OCH_3	CH_3	N	
579	"	H	H	OC_2H_5	$NHCH_3$	N	
580	"	H	CH_3	OCH_3	OCH_3	CH	
581	"	4-CH_3	H	OCH_3	OCH_3	CH	
582	"	4-Cl	H	OCH_3	OCH_3	CH	
583	"	6-CH_3	H	OCH_3	OCH_3	CH	
584	"	6-OCH_3	H	OCH_3	OCH_3	CH	
585	"	6-Cl	H	OCH_3	OCH_3	CH	
586	"	6-F	H	OCH_3	OCH_3	CH	
587	—N(Pr)SO_2CH_3	H	H	OCH_3	CH	182–183 (D.)	
588	"	H	H	OCH_3	CH_3	CH	
589	"	H	H	OCH_3	Cl	CH	
590	"	H	H	CH_3	CH_3	CH	
591	"	H	H	OCH_3	OCH_3	N	
592	"	H	H	OCH_3	CH_3	N	
593	"	H	H	OC_2H_5	$NHCH_3$	N	
594	"	H	CH_3	OCH_3	OCH_3	CH	
595	"	4-CH_3	H	OCH_3	OCH_3	CH	
596	"	4-Cl	H	OCH_3	OCH_3	CH	
597	"	6-CH_3	H	OCH_3	OCH_3	CH	
598	"	6-OCH_3	H	OCH_3	OCH_3	CH	
599	"	6-Cl	H	OCH_3	OCH_3	CH	
600	"	6-F	H	OCH_3	OCH_3	CH	
601	—N(i-Pr)SO_2CH_3	H	H	OCH_3	OCH_3	CH	195 (D.)
602	"	H	H	OCH_3	CH_3	CH	
603	"	H	H	OCH_3	Cl	CH	
604	"	H	H	CH_3	CH_3	CH	
605	"	H	H	OCH_3	OCH_3	N	
606	"	H	H	OCH_3	CH_3	N	
607	"	H	H	OC_2H_5	$NHCH_3$	N	
608	"	H	CH_3	OCH_3	OCH_3	CH	
609	"	4-CH_3	H	OCH_3	OCH_3	CH	
610	"	4-Cl	H	OCH_3	OCH_3	CH	
611	"	6-CH_3	H	OCH_3	OCH_3	CH	
612	"	6-OCH_3	H	OCH_3	OCH_3	CH	
613	"	6-Cl	H	OCH_3	OCH_3	CH	
614	"	6-F	H	OCH_3	OCH_3	CH	
615	—N(i-Bu)SO_2CH_3	H	H	OCH_3	OCH_3	CH	166–167
616	"	H	H	OCH_3	CH_3	CH	
617	"	H	H	OCH_3	Cl	CH	
618	"	H	H	CH_3	CH_3	CH	

TABLE 1-continued



Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
619	"	H	H	OCH_3	OCH_3	N	
620	"	H	H	OCH_3	CH_3	N	
621	"	H	H	OC_2H_5	$NHCH_3$	N	
622	"	H	CH_3	OCH_3	OCH_3	CH	
623	"	4-CH_3	H	OCH_3	OCH_3	CH	
624	"	4-Cl	H	OCH_3	OCH_3	CH	
625	"	6-CH_3	H	OCH_3	OCH_3	CH	
626	"	6-OCH_3	H	OCH_3	OCH_3	CH	
627	"	6-Cl	H	OCH_3	OCH_3	CH	
628	"	6-F	H	OCH_3	OCH_3	CH	
629	$-N(CF_3)SO_2CH_3$	H	H	OCH_3	OCH_3	CH	
630	"	H	H	OCH_3	CH_3	CH	
631	"	H	H	OCH_3	Cl	CH	
632	"	H	H	CH_3	CH_3	CH	
633	"	H	H	OCH_3	OCH_3	N	
634	"	H	H	OCH_3	CH_3	N	
635	"	H	H	OC_2H_5	$NHCH_3$	N	
636	"	H	HCH_3	OCH_3	OCH_3	CH	
637	"	4-CH_3	H	OCH_3	OCH_3	CH	
638	"	4-Cl	H	OCH_3	OCH_3	CH	
639	"	6-CH_3	H	OCH_3	OCH_3	CH	
640	"	6-OCH_3	H	OCH_3	OCH_3	CH	
641	"	6-Cl	H	OCH_3	OCH_3	CH	
642	"	6-F	H	OCH_3	OCH_3	CH	
643	$-N(CHF_2)SO_2CH_3$	H	H	OCH_3	OCH_3	CH	
644	"	H	H	OCH_3	CH_3	CH	
645	"	H	H	OCH_3	Cl	CH	
646	"	H	H	CH_3	CH_3	CH	
647	"	H	H	OCH_3	OCH_3	N	
648	"	H	H	OCH_3	CH_3	N	
649	"	H	H	OC_2H_5	$NHCH_3$	N	
650	"	H	CH_3	OCH_3	OCH_3	CH	
651	"	4-CH_3	H	OCH_3	OCH_3	CH	
652	"	4-Cl	H	OCH_3	OCH_3	CH	
653	"	6-CH_3	H	OCH_3	OCH_3	CH	
654	"	6-OCH_3	H	OCH_3	OCH_3	CH	
655	"	6-Cl	H	OCH_3	OCH_3	CH	
656	"	6-F	H	OCH_3	OCH_3	CH	
657	$-N(CH_2CF_3)(SO_2CH_3)$	H	H	OCH_3	OCH_3	CH	
658	"	H	H	OCH_3	CH_3	CH	
659	"	H	H	OCH_3	Cl	CH	
660	"	H	H	CH_3	CH_3	CH	
661	"	H	H	OCH_3	OCH_3	N	
662	"	H	H	OCH_3	CH_3	N	
663	"	H	H	OC_2H_5	$NHCH_3$	N	
664	"	H	CH_3	OCH_3	OCH_3	CH	
665	"	4-CH_3	H	OCH_3	OCH_3	CH	
666	"	4-Cl	H	OCH_3	OCH_3	CH	
667	"	6-CH_3	H	OCH_3	OCH_3	CH	
668	"	6-OCH_3	H	OCH_3	OCH_3	CH	
669	"	6-Cl	H	OCH_3	OCH_3	CH	
670	"	6-F	H	OCH_3	OCH_3	CH	
671	$-N(CH_2CH_2Cl)(SO_2CH_3)$	H	H	OCH_3	OCH_3	CH	
672	"	H	H	OCH_3	CH_3	CH	
673	"	H	H	OCH_3	Cl	CH	
674	"	H	H	CH_3	CH_3	CH	
675	"	H	H	OCH_3	OCH_3	N	

TABLE 1-continued



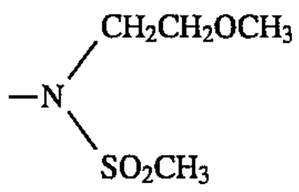
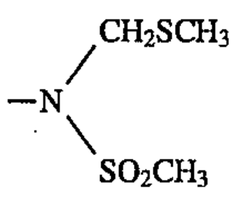
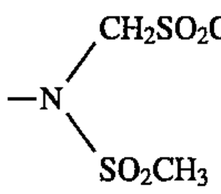
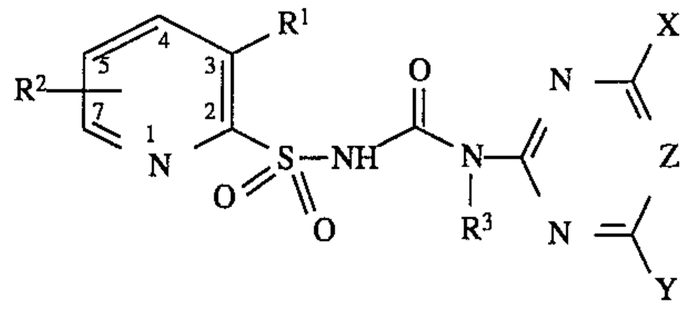
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
676	"	H	H	OCH_3	CH_3	N	
677	"	H	H	OC_2H_5	$NHCH_3$	N	
678	"	H	CH_3	OCH_3	OCH_3	CH	
679	"	4-CH_3	H	OCH_3	OCH_3	CH	
680	"	4-Cl	H	OCH_3	OCH_3	CH	
681	"	6-CH_3	H	OCH_3	OCH_3	CH	
682	"	6-OCH_3	H	OCH_3	OCH_3	CH	
683	"	6-Cl	H	OCH_3	OCH_3	CH	
684	"	6-F	H	OCH_3	OCH_3	CH	
685		H	H	OCH_3	OCH_3	CH	
686	"	H	H	OCH_3	CH_3	CH	
687	"	H	H	OCH_3	Cl	CH	
688	"	H	H	CH_3	CH_3	CH	
689	"	H	H	OCH_3	OCH_3	N	
690	"	H	H	OCH_3	CH_3	N	
691	"	H	H	OC_2H_5	$NHCH_3$	N	
692	"	H	CH_3	OCH_3	OCH_3	CH	
693	"	4-CH_3	H	OCH_3	OCH_3	CH	
694	"	4-Cl	H	OCH_3	OCH_3	CH	
695	"	6-CH_3	H	OCH_3	OCH_3	CH	
696	"	6-OCH_3	H	OCH_3	OCH_3	CH	
697	"	6-Cl	H	OCH_3	OCH_3	CH	
698	"	6-F	H	OCH_3	OCH_3	CH	
699		H	H	OCH_3	OCH_3	CH	
700	"	H	H	OCH_3	CH_3	CH	
701	"	H	H	OCH_3	Cl	CH	
702	"	H	H	CH_3	CH_3	CH	
703	"	H	H	OCH_3	OCH_3	N	
704	"	H	H	OCH_3	CH_3	N	
706	"	H	H	OC_2H_5	$NHCH_3$	N	
707	"	H	CH_3	OCH_3	OCH_3	CH	
708	"	4-CH_3	H	OCH_3	OCH_3	CH	
709	"	4-Cl	H	OCH_3	OCH_3	CH	
710	"	6-CH_3	H	OCH_3	OCH_3	CH	
711	"	6-OCH_3	H	OCH_3	OCH_3	CH	
712	"	6-Cl	H	OCH_3	OCH_3	CH	
713	"	6-F	H	OCH_3	OCH_3	CH	
714		H	H	OCH_3	OCH_3	CH	
715	"	H	H	OCH_3	CH_3	CH	
716	"	H	H	OCH_3	Cl	CH	
717	"	H	H	CH_3	CH_3	CH	
718	"	H	H	OCH_3	OCH_3	N	
719	"	H	H	OCH_3	CH_3	N	
720	"	H	H	OC_2H_5	$NHCH_3$	N	
721	"	H	CH_3	OCH_3	OCH_3	CH	
722	"	4-CH_3	H	OCH_3	OCH_3	CH	
723	"	4-Cl	H	OCH_3	OCH_3	CH	
724	"	6-CH_3	H	OCH_3	OCH_3	CH	
725	"	6-OCH_3	H	OCH_3	OCH_3	CH	
726	"	6-Cl	H	OCH_3	OCH_3	CH	
727	"	6-F	H	OCH_3	OCH_3	CH	

TABLE 1-continued



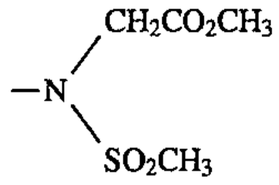
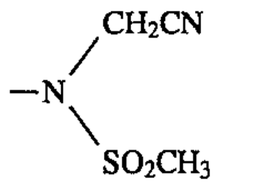
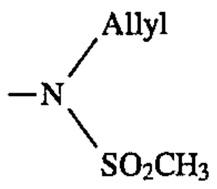
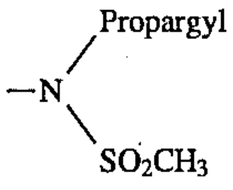
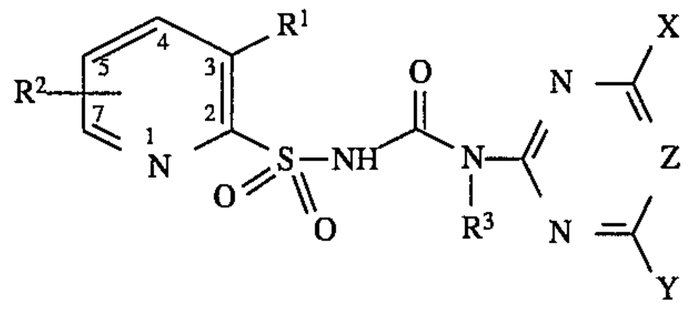
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
728		H	H	OCH_3	OCH_3	CH	
729	"	H	H	OCH_3	CH_3	CH	
730	"	H	H	OCH_3	Cl	CH	
731	"	H	H	CH_3	CH_3	CH	
732	"	H	H	OCH_3	OCH_3	N	
733	"	H	H	OCH_3	CH_3	N	
734	"	H	H	OC_2H_5	$NNCH_3$	N	
735	"	H	CH_3	OCH_3	OCH_3	CH	
735	"	4-CH_3	H	OCH_3	OCH_3	CH	
737	"	4-Cl	H	OCH_3	OCH_3	CH	
738	"	6-CH_3	H	OCH_3	OCH_3	CH	
739	"	6-OCH_3	H	OCH_3	OCH_3	CH	
740	"	6-Cl	H	OCH_3	OCH_3	CH	
741	"	6-F	H	OCH_3	OCH_3	CH	
742		H	H	OCH_3	OCH_3	CH	
743	"	H	H	OCH_3	CH_3	CH	
744	"	H	H	OCH_3	Cl	CH	
745	"	H	H	CH_3	CH_3	CH	
746	"	H	H	OCH_3	OCH_3	N	
747	"	H	H	OCH_3	CH_3	N	
748	"	H	H	OC_2H_5	$NHCH_3$	N	
749	"	H	CH_3	OCH_3	OCH_3	CH	
750	"	4-CH_3	H	OCH_3	OCH_3	CH	
751	"	4-Cl	H	OCH_3	OCH_3	CH	
752	"	6-CH_3	H	OCH_3	OCH_3	CH	
753	"	6-OCH_3	H	OCH_3	OCH_3	CH	
754	"	6-Cl	H	OCH_3	OCH_3	CH	
755	"	6-F	H	OCH_3	OCH_3	CH	
756		H	H	OCH_3	OCH_3	CH	208–210 (D.)
757	"	H	H	OCH_3	CH_3	CH	
758	"	H	H	OCH_3	Cl	CH	
759	"	H	H	CH_3	CH_3	CH	
760	"	H	H	OCH_3	OCH_3	N	
761	"	H	H	OCH_3	CH_3	N	
762	"	H	H	OC_2H_5	$NHCH_3$	N	
736	"	H	CH_3	OCH_3	OCH_3	CH	
764	"	4-CH_3	H	OCH_3	OCH_3	CH	
765	"	4-Cl	H	OCH_3	OCH_3	CH	
766	"	6-CH_3	H	OCH_3	OCH_3	CH	
767	"	6-OCH_3	H	OCH_3	OCH_3	CH	
768	"	6-Cl	H	OCH_3	OCH_3	CH	
769	"	6-F	H	OCH_3	OCH_3	CH	
770		H	H	OCH_3	OCH_3	CH	167–168 (D.)
771	"	H	H	OCH_3	CH_3	CH	
772	"	H	H	OCH_3	Cl	CH	
773	"	H	H	CH_3	CH_3	CH	

TABLE 1-continued



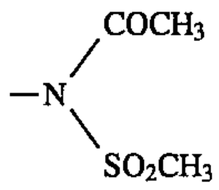
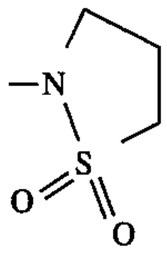
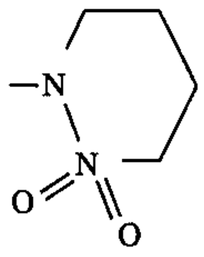
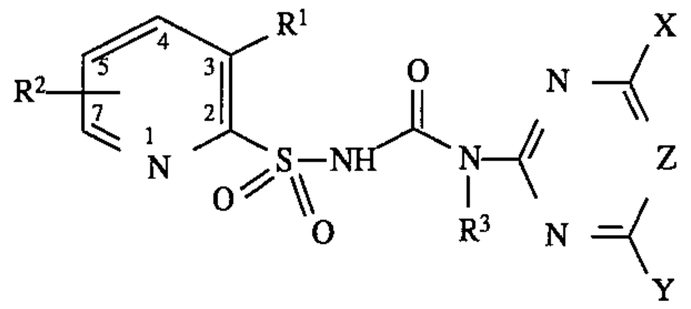
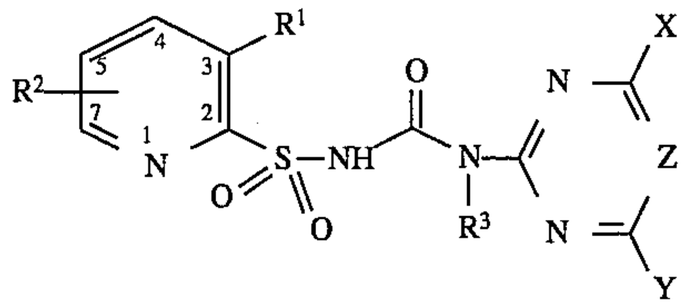
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
774	"	H	H	OCH_3	OCH_3	N	
775	"	H	H	OCH_3	CH_3	N	
776	"	H	H	OC_2H_5	$NHCH_3$	N	
777	"	H	CH_3	OCH_3	OCH_3	CH	
778	"	4-CH_3	H	OCH_3	OCH_3	CH	
779	"	4-Cl	H	OCH_3	OCH_3	CH	
780	"	6-CH_3	H	OCH_3	OCH_3	CH	
781	"	6-OCH_3	H	OCH_3	OCH_3	CH	
782	"	6-Cl	H	OCH_3	OCH_3	CH	
783	"	6-F	H	OCH_3	OCH_3	CH	
784		H	H	OCH_3	OCH_3	CH	
785	"	H	H	OCH_3	CH_3	CH	
786	"	H	H	OCH_3	Cl	CH	
787	"	H	H	CH_3	CH_3	CH	
788	"	H	H	OCH_3	OCH_3	N	
789	"	H	H	OCH_3	CH_3	N	
790	"	H	H	OC_2H_5	$NHCH_3$	N	
791	"	H	CH_3	OCH_3	OCH_3	CH	
792	"	4-CH_3	H	OCH_3	OCH_3	CH	
793	"	4-Cl	H	OCH_3	OCH_3	CH	
794	"	6-CH_3	H	OCH_3	OCH_3	CH	
795	"	6-OCH_3	H	OCH_3	OCH_3	CH	
796	"	6-Cl	H	OCH_3	OCH_3	CH	
797	"	6-F	H	OCH_3	OCH_3	CH	
798		H	H	OCH_3	OCH_3	CH	195 (D.)
799	"	H	H	OCH_3	CH_3	CH	
800	"	H	H	OCH_3	Cl	CH	
801	"	H	H	CH_3	CH_3	CH	
802	"	H	H	OCH_3	OCH_3	N	
803	"	H	H	OCH_3	CH_3	N	
804	"	H	H	OC_2H_5	$NHCH_3$	N	
805	"	H	CH_3	OCH_3	OCH_3	CH	
806	"	4-CH_3	H	OCH_3	OCH_3	CH	
807	"	4-Cl	H	OCH_3	OCH_3	CH	
808	"	6-CH_3	H	OCH_3	OCH_3	CH	
809	"	6-OCH_3	H	OCH_3	OCH_3	CH	
810	"	6-Cl	H	OCH_3	OCH_3	CH	
811	"	6-F	H	OCH_3	OCH_3	CH	
812		H	H	OCH_3	OCH_3	CH	192–193 (D.)
813	"	H	H	OCH_3	CH_3	CH	
814	"	H	H	OCH_3	Cl	CH	
815	"	H	H	CH_3	CH_3	CH	
816	"	H	H	OCH_3	OCH_3	N	
817	"	H	H	OCH_3	CH_3	N	
818	"	H	H	OC_2H_5	$NHCH_3$	N	
819	"	H	CH_3	OCH_3	OCH_3	CH	
820	"	4-CH_3	H	OCH_3	OCH_3	CH	
821	"	4-Cl	H	OCH_3	OCH_3	CH	

TABLE 1-continued



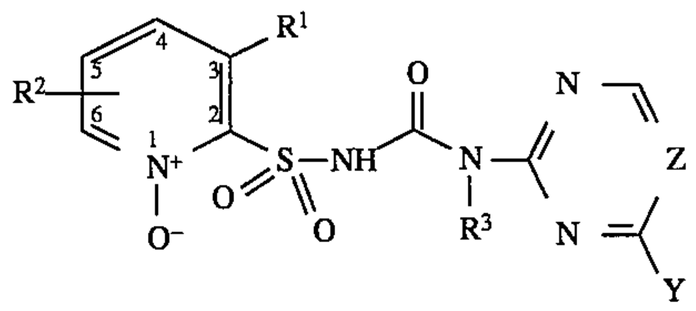
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
822	"	6-CH_3	H	OCH_3	OCH_3	CH	
823	"	6-OCH_3	H	OCH_3	OCH_3	CH	
824	"	6-Cl	H	OCH_3	OCH_3	CH	
825	"	6-F	H	OCH_3	OCH_3	CH	
826	$-N(OCH_3)SO_2CH_3$	H	H	OCH_3	OCH_3	CH	
827	"	H	H	OCH_3	CH_3	CH	
828	"	H	H	OCH_3	Cl	CH	
829	"	H	H	CH_3	CH_3	CH	
830	"	H	H	OCH_3	OCH_3	N	
831	"	H	H	OCH_3	CH_3	N	
832	"	H	H	OC_2H_5	$NHCH_3$	N	
833	"	H	CH_3	OCH_3	OCH_3	CH	
834	"	4-CH_3	H	OCH_3	OCH_3	CH	
835	"	4-Cl	H	OCH_3	OCH_3	CH	
836	"	6-CH_3	H	OCH_3	OCH_3	CH	
837	"	6-OCH_3	H	OCH_3	OCH_3	CH	
838	"	6-Cl	H	OCH_3	OCH_3	CH	
839	"	6-F	H	OCH_3	OCH_3	CH	
840	$-N(CH_3)SO_2CF_3$	H	H	OCH_3	OCH_3	CH	
841	"	H	H	OCH_3	CH_3	CH	
842	"	H	H	OCH_3	Cl	CH	
843	"	H	H	CH_3	CH_3	CH	
844	"	H	H	OCH_3	OCH_3	N	
845	"	H	H	OCH_3	CH_3	N	
846	"	H	H	OC_2H_5	$NHCH_3$	N	
847	"	CH_3	OCH_3	OCH_3	CH		
848	"	4-CH_3	H	OCH_3	OCH_3	CH	
849	"	4-Cl	H	OCH_3	OCH_3	CH	
850	"	6-CH_3	H	OCH_3	OCH_3	CH	
851	"	6-OCH_3	H	OCH_3	OCH_3	CH	
852	"	6-Cl	H	OCH_3	OCH_3	CH	
853	"	6-F	H	OCH_3	OCH_3	CH	
854	$-N(CH_3)SO_2Et$	H	H	OCH_3	OCH_3	CH	176–177
855	"	H	H	OCH_3	CH_3	CH	
856	"	H	H	OCH_3	Cl	CH	
857	"	H	H	CH_3	CH_3	CH	
858	"	H	H	OCH_3	OCH_3	N	
859	"	H	H	OCH_3	CH_3	N	
860	"	H	H	OC_2H_5	$NHCH_3$	N	
861	"	H	CH_3	OCH_3	OCH_3	CH	
862	"	4-CH_3	H	OCH_3	OCH_3	CH	
863	"	4-Cl	H	OCH_3	OCH_3	CH	
864	"	6-CH_3	H	OCH_3	OCH_3	CH	193–194 (D.)
865	"	6-OCH_3	H	OCH_3	OCH_3	CH	
866	"	6-Cl	H	OCH_3	OCH_3	CH	
867	"	6-F	H	OCH_3	OCH_3	CH	
868	$-N(CH_3)SO_2Ph$	H	H	OCH_3	OCH_3	CH	
869	"	H	H	OCH_3	CH_3	CH	
870	"	H	H	OCH_3	Cl	CH	
871	"	H	H	CH_3	CH_3	CH	
872	"	H	H	OCH_3	OCH_3	N	
873	"	H	H	OCH_3	CH_3	N	
874	"	H	H	OC_2H_5	$NHCH_3$	N	
875	"	H	CH_3	OCH_3	OCH_3	CH	
876	"	4-CH_3	H	OCH_3	OCH_3	CH	
877	"	4-Cl	H	OCH_3	OCH_3	CH	
878	"	6-CH_3	H	OCH_3	OCH_3	CH	
879	"	6-OCH_3	H	OCH_3	OCH_3	CH	
880	"	6-Cl	H	OCH_3	OCH_3	CH	
881	"	6-F	H	OCH_3	OCH_3	CH	
882	$-N(CH_3)SO_2NMe_2$	H	H	OCH_3	OCH_3	CH	
883	"	H	H	OCH_3	CH_3	CH	
884	"	H	H	OCH_3	Cl	CH	
885	"	H	H	CH_3	CH_3	CH	
886	"	H	H	OCH_3	OCH_3	N	
887	"	H	H	OCH_3	CH_3	N	
888	"	H	H	OC_2H_5	$NHCH_3$	N	
889	"	H	CH_3	OCH_3	OCH_3	CH	

TABLE 1-continued



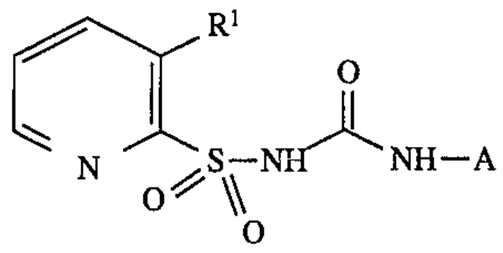
Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
890	"	4-CH_3	H	OCH_3	OCH_3	CH	
891	"	4-Cl	H	OCH_3	OCH_3	CH	
892	"	6-CH_3	H	OCH_3	OCH_3	CH	
893	"	6-OCH_3	H	OCH_3	OCH_3	CH	
894	"	6-Cl	H	OCH_3	OCH_3	CH	
895	"	6-F	H	OCH_3	OCH_3	CH	

TABLE 2



Cpd. No.	R^1	R^2	R^3	X	Y	Z	M.p. [°C.]
896	I	H	H	OCH_3	OCH_3	CH	
897	"	H	H	OCH_3	CH_3	CH	
898	"	H	H	OCH_3	Cl	CH	
899	"	H	H	CH_3	CH_3	CH	
900	"	H	H	OCH_3	OCH_3	N	
901	"	H	H	OCH_3	CH_3	N	
902	"	H	H	OC_2H_5	$NHCH_3$	N	
903	"	H	CH_3	OCH_3	OCH_3	CH	
904	"	4-CH_3	H	OCH_3	OCH_3	CH	
905	"	6-CH_3	H	OCH_3	OCH_3	CH	
906	"	4-Cl	H	OCH_3	OCH_3	CH	
907	"	6-Cl	H	OCH_3	OCH_3	CH	
908	"	4-F	H	OCH_3	OCH_3	CH	
909	"	6-F	H	OCH_3	OCH_3	CH	
910	"	4-OCH_3	H	OCH_3	OCH_3	CH	
911	"	6-OCH_3	H	OCH_3	OCH_3	CH	
912	$-OSO_2N(CH_3)_2$	H	H	OCH_3	OCH_3	CH	
913	"	4-CH_3	H	OCH_3	OCH_3	CH	
914	"	6-CH_3	H	OCH_3	OCH_3	CH	
915	"	4-Cl	H	OCH_3	OCH_3	CH	
916	"	6-Cl	H	OCH_3	OCH_3	CH	
917	"	4-F	H	OCH_3	OCH_3	CH	
918	"	6-F	H	OCH_3	OCH_3	CH	
919	"	4-OCH_3	H	OCH_3	OCH_3	CH	
920	"	6-OCH_3	H	OCH_3	OCH_3	CH	
921	$-N(CH_3)SO_2CH_3$	H	H	OCH_3	OCH_3	CH	
922	"	H	H	OCH_3	CH_3	CH	
923	"	H	H	OCH_3	Cl	CH	
924	"	H	H	CH_3	CH_3	CH	
925	"	H	H	OCH_3	OCH_3	N	
926	"	H	H	OCH_3	CH_3	N	
927	"	H	H	OC_2H_5	$NHCH_3$	N	
928	"	H	CH_3	OCH_3	OCH_3	CH	
929	"	4-CH_3	H	OCH_3	OCH_3	CH	
930	"	6-CH_3	H	OCH_3	OCH_3	CH	
931	"	4-Cl	H	OCH_3	OCH_3	CH	
932	"	6-Cl	H	OCH_3	OCH_3	CH	
933	"	4-F	H	OCH_3	OCH_3	CH	
934	"	6-F	H	OCH_3	OCH_3	CH	
935	"	4-OCH_3	H	OCH_3	OCH_3	CH	
936	"	6-OCH_3	H	OCH_3	OCH_3	CH	
937	$-NHSO_2CH_3$	H	H	OCH_3	OCH_3	CH	
938	$-NHSO_2C_2H_5$	H	H	OCH_3	OCH_3	CH	
939	$-N(SO_2CH_3)_2$	H	H	OCH_3	OCH_3	CH	
940	$-N(CH_3)SO_2Et$	H	H	OCH_3	OCH_3	CH	
941	$-N(Et)SO_2CH_3$	H	H	OCH_3	OCH_3	CH	

TABLE 3



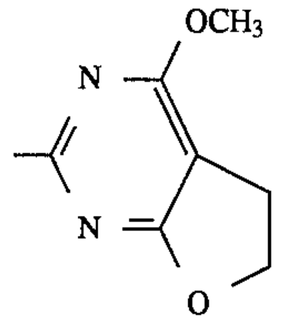
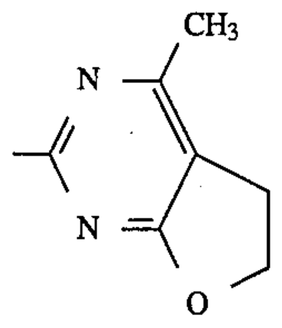
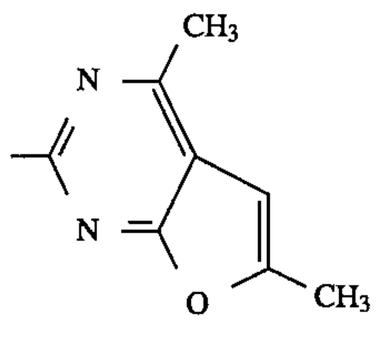
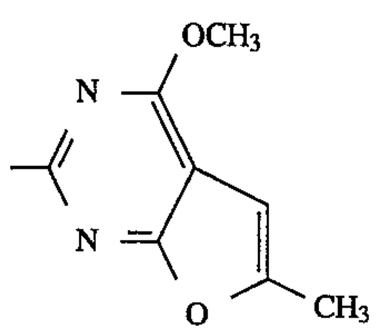
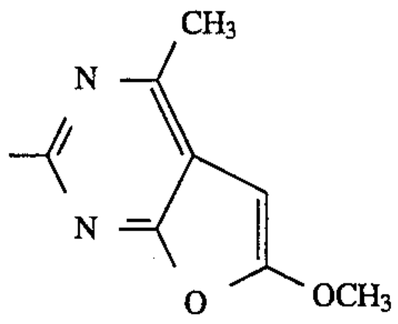
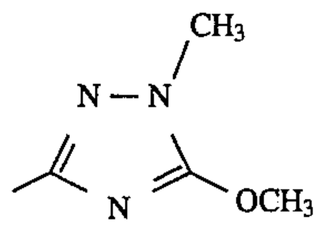
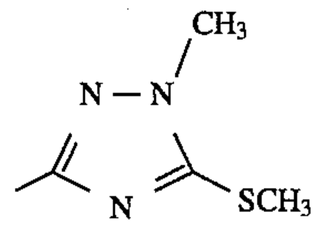
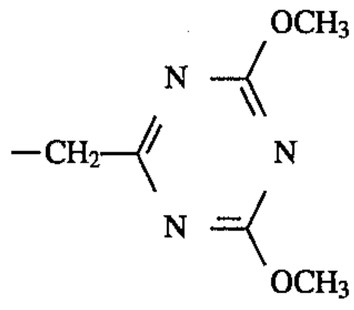
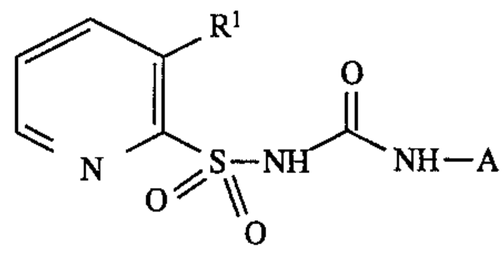
Cpa. No.	R^1	A
942	I	
943	$-OSO_2N(CH_3)_2$	
944	I	
945	$-OSO_2N(CH_3)_3$	
946	I	
947	$-OSO_2N(CH_3)_2$	
948	I	
949	$-OSO_2N(CH_3)_2$	

TABLE 3-continued



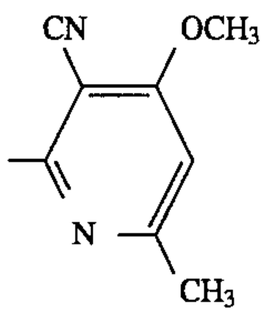
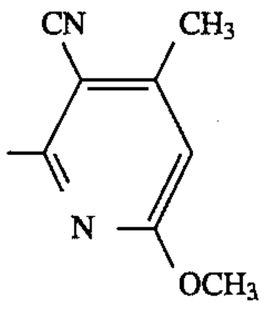
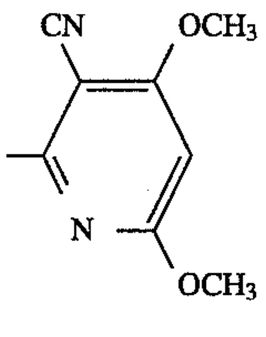
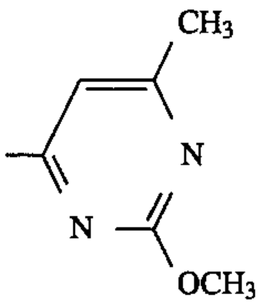
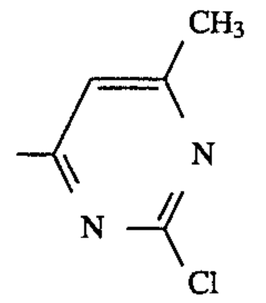
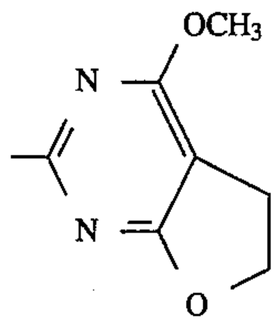
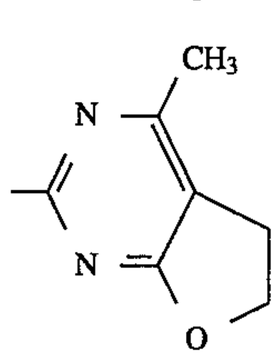
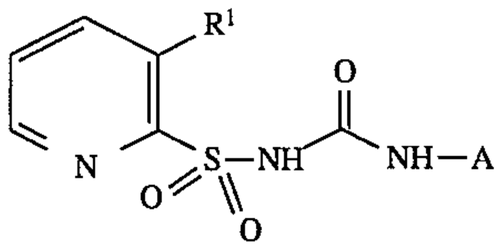
Cpa. No.	R^1	A
950	I	
951	$-OSO_2N(CH_3)_2$	
952	I	
953	$-OSO_2N(CH_3)_2$	
954	I	
955	$-N(CH_3)SO_2CH_3$	
956	"	

TABLE 3-continued



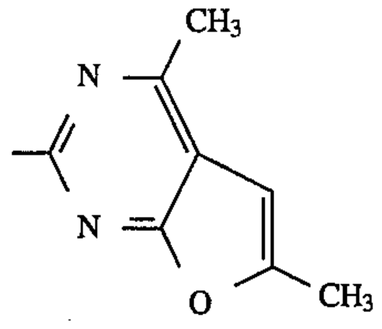
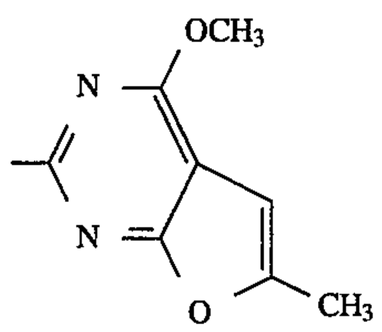
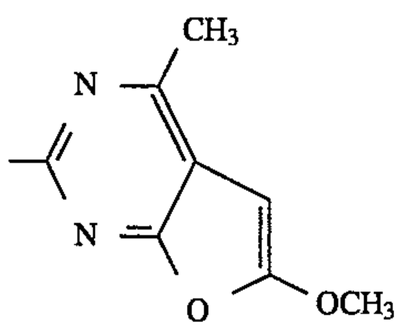
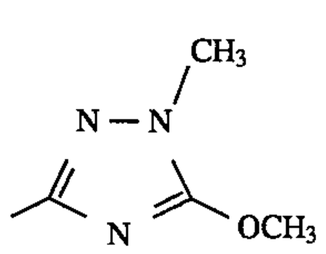
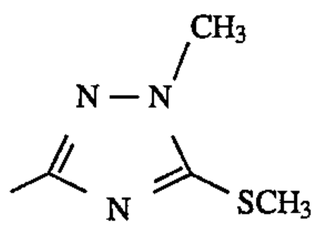
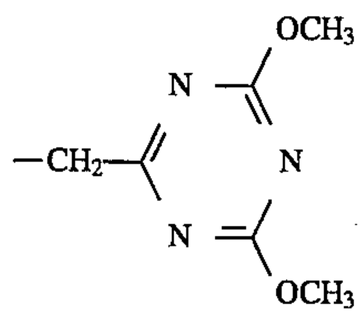
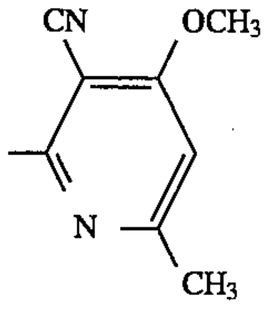
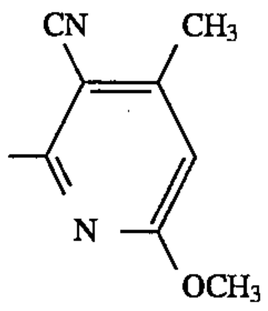
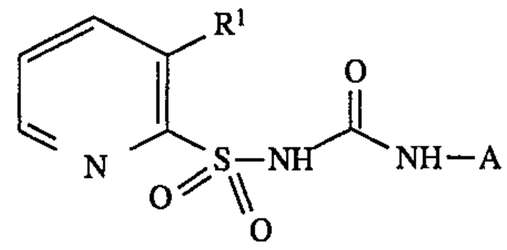
Cpa. No.	R^1	A
957	"	
958	"	
959	"	
960	$-N(CH_3)SO_2CH_3$	
961	"	
962	"	
963	"	
964	"	

TABLE 3-continued



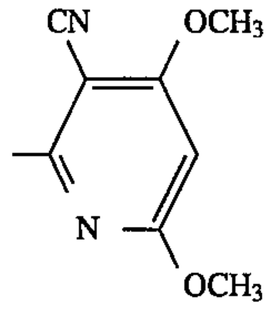
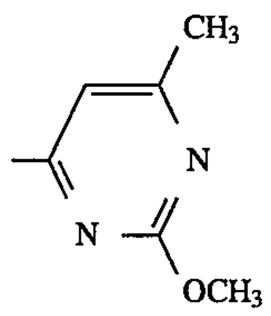
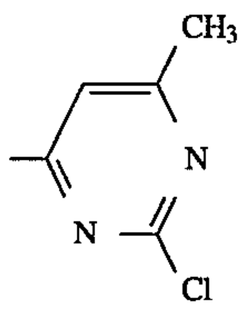
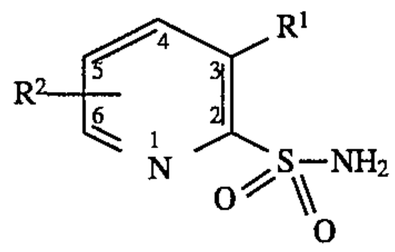
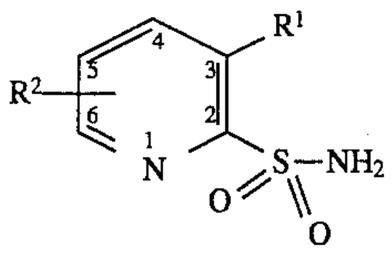
Cpa. No.	R^1	A
965	"	
966	"	
967	"	

TABLE 4



Cpd. No.	R^1	R^2	M.p. [°C.]
968	I	H	247–250 (dec.)
969	"	4-CH_3	
970	"	5-CH_3	
971	"	6-CH_3	
972	"	4-OCH_3	
973	"	5-OCH_3	
974	"	6-OCH_3	
975	"	4-Cl	
976	"	5-Cl	
977	"	6-Cl	
978	"	4-F	
979	"	5-F	
980	"	6-F	
981	"	6-C_2H_5	
982	"	6-C_4H_9	
983	"	6-OC_2H_5	
984	"	6-OCH_2CF_3	
985	"	6-SCH_3	
986	"	6-SO_2CH_3	
987	"	6-NO_2	
988	"	6-CO_2CH_3	
989	"	6-Br	
990	"	6-CF_3	
991	"	6-OCF_3	
992	"	6-OCF_2H	
993	$-OSO_2N(CH_3)_2$	H	oil
994	"	4-CH_3	
995	"	5-CH_3	
996	"	6-CH_3	
997	"	4-OCH_3	

TABLE 4-continued



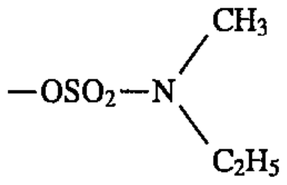
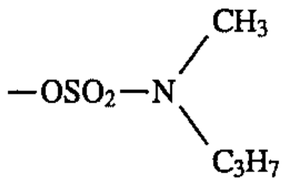
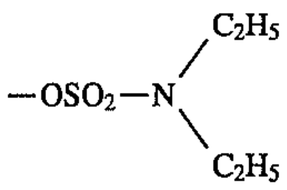
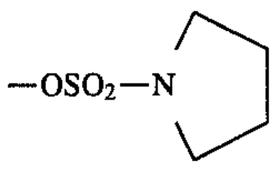
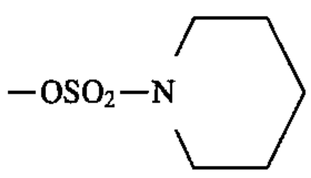
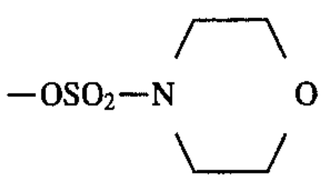
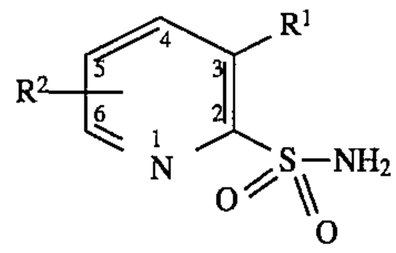
Cpd. No.	R^1	R^2	M.p. [°C.]
998	"	5-OCH_3	
999	"	6-OCH_3	
1000	"	4-Cl	
1001	"	5-Cl	
1002	"	6-Cl	
1002	"	4-F	
1004	"	5-F	
1005	"	6-F	
1006	"	6-C_2H_5	
1007	"	6-C_4H_9	
1008	"	6-OC_2H_5	
1009	"	6-OCH_2CF_3	
1010	"	6-SCH_3	
1011	"	6-SO_2CH_3	
1012	"	6-NO_2	
1013	"	6-CO_2CH_3	
1014	"	6-Br	
1015	"	6-CF_3	
1016	"	6-OCF_3	
1017	"	6-OCF_2H	
1018		H	
1019		H	
1020		H	94–97
1021		H	142–143
1022		H	166–167
1023		H	oil
1024	$-NHSO_2CH_3$	H	176–178
1025	$-NHSO_2C_2H_5$	H	
1026	$-NHSO_2C_3H_7$	H	
1027	$-NHSO_2C_6H_5$	H	
1028	$-N(SO_2CH_3)_2$	H	208
1029	$-N(SO_2C_2H_5)_2$	H	
1030	$-N(CH_3)SO_2CH_3$	H	175
1031	"	4-CH_3	
1032	"	5-CH_3	
1033	"	6-CH_3	124
1034	"	4-OCH_3	
1035	"	5-OCH_3	
1036	"	6-OCH_3	
1037	"	4-Cl	
1038	"	5-Cl	

TABLE 4-continued



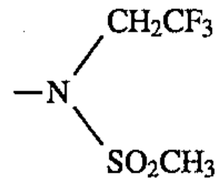
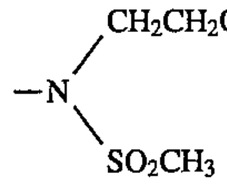
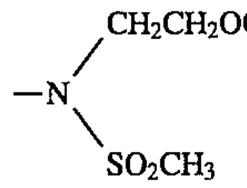
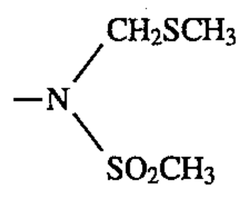
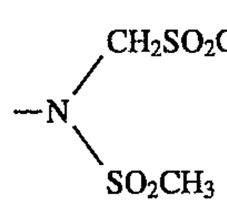
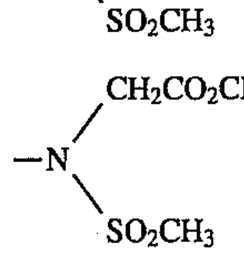
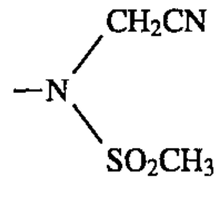
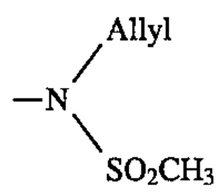
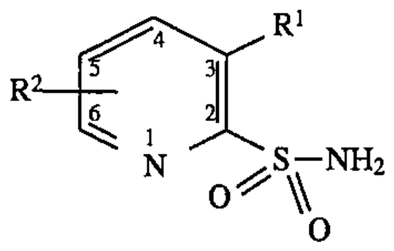
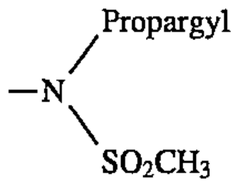
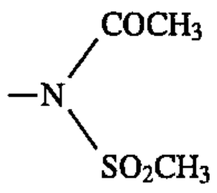
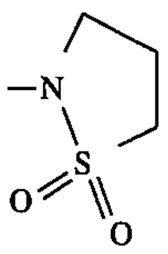
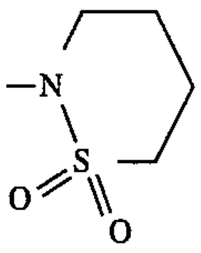
Cpd. No.	R^1	R^2	M.p. [°C.]
1039	"	6-Cl	
1040	"	4-F	
1041	"	5-F	
1042	"	6-F	
1043	"	6-C_2H_5	
1044	"	6-C_4H_9	
1045	"	6-OC_2H_5	
1046	"	6-OCH_2CF_3	
1047	"	6-SCH_3	
1048	"	6-SO_2CH_3	
1049	"	6-NO_2	
1050	"	6-CO_2CH_3	
1051	"	6-Br	
1052	"	6-CF_3	
1053	"	6-OCF_3	
1054	"	6-OCF_2H	
1055	$-N(Et)SO_2CH_3$	H	178–179 (D.)
1056	$-N(Pr)SO_2CH_3$	H	149–150
1057	$-N(i\text{-}Pr)SO_2CH_3$	H	201
1058	$-N(i\text{-}Bu)SO_2CH_3$	H	amorphous
1059		H	
1060		H	
1061		H	
1062		H	
1063		H	
1064		H	
1065		H	
1066		H	143–144

TABLE 4-continued



Cpd. No.	R^1	R^2	M.p. [°C.]
1067		H	138–141
1068		H	
1069		H	200 (D.)
1070		H	220–221 (D.)
1071	$-N(OCH_3)SO_2CH_3$	H	
1072	$-N(CH_3)SO_2C_2H_5$	H	136–137
1073	$-N(CH_3)SO_2CF_3$	H	
1074	$-N(CH_3)SO_2Ph$	H	200–203
1075	$-N(CH_3)SO_2N(Me)_2$	H	

B. FORMULATION EXAMPLES

a) A dusting agent is obtained by mixing 10 parts by weight of a compound of the formula (I) and 90 parts by weight of talc or inert material and comminuting in a hammer mill.

b) A wettable powder which is easily dispersible in water is obtained by mixing 25 parts by weight of a compound of the formula (I), 64 parts by weight of kaolin-containing-quartz as inert material, 10 parts by weight of potassium ligninsulfonate and 1 part by weight of sodium oleoylmethyltaurate as wetting agent and dispersant and grinding in a pin-disk mill.

c) A dispersion concentrate which is easily dispersible in water is obtained by mixing 20 parts by weight of a compound of the formula (I) with 6 parts by weight of alkylphenol polyglycol ether (®Triton X 207), 3 parts by weight of isotridecanol polyglycol ether (8) EO) and 71 parts by weight of paraffinic mineral oil (boiling range, for example, about 255° to over 277° C.) and grinding to a fineness of less than 5 microns in a friction ball mill.

d) An emulsifiable concentrate is obtained from 15 parts by weight of a compound of the formula (I), 75 parts by weight of cyclohexane as solvent and 10 parts by weight of ethoxylated nonylphenol as emulsifier.

e) Granules which are dispersible in water are obtained by mixing

75 parts by weight of a compound of the formula (I),

10 parts by weight of calcium ligninsulfonate,

5 parts by weight of sodium lauryl sulfate,

3 parts by weight of polyvinyl alcohol and

7 parts by weight of kaolin,

grinding in a pinned-disk mill and granulating the powder in a fluidized bed by spraying water as a granulating fluid.

f) Granules which are dispersible in water are also obtained by homogenizing and precomminuting 25 parts by weight of a compound of the formula (I),

5 parts by weight of sodium 2,2'-dinaphthylmethane-6,6'-disulfonate,

2 parts by weight of sodium oleolymethyltaurate,

1 parts by weight of polyvinyl alcohol,

17 parts by weight of calcium carbonate and

50 parts by weight of water,

then grinding in a bead mill and atomizing the suspension thus obtained in a spray tower by means of a single substance nozzle and drying.

g) Extruder granules are obtained by mixing 20 parts by weight of active compound, 3 parts by weight of sodium ligninsulfonate, 1 part by weight of carboxymethylcellulose and 76 parts by weight of kaolin, grinding and moistening with water. This mixture is extruded and then dried in a stream of air.

C. Biological examples

1. Weed action pre-emergence

Seeds or pieces of rhizome of monocotyledon and dicotyledon weed plants were planted in sandy loam soil in plastic pots and covered with earth. The compounds according to the invention formulated in the form of wettable powders or emulsion concentrates were then applied in various dosages to the surface of the covering earth as aqueous suspensions or emulsions using a water application rate of 600 to 800 l/ha after conversion.

After the treatment, the pots were placed in a greenhouse and kept under good growth conditions for the weeds. visual assessment of the plants and the emergence damage was carried out in comparison to untreated controls after the emergence of the experiment plants after an experiment time of 3 to 4 weeks. As the assessment values show, the compounds according to the invention have a good herbicidal pre-emergence activity against a broad spectrum of weed grasses and weeds (cf. Table 5).

TABLE 5

	Pre-emergence action of the compounds according to the invention						
Ex. No.	Dose (kg a.i./ha)	Herbicidal action LOMU	ECCR	AVSA	STME	CHSE	SIAL
1	0.3	5	5	5	5	5	5
136	0.3	5	5	4	5	5	5
4	0.3	5	5	5	5	5	5
411	0.3	5	5	5	5	5	5
354	0.3	5	5	5	5	5	5
439	0.3	5	5	5	5	5	5
312	0.3	4	4	2	4	4	5
326	0.3	2	2	2	3	3	4
7	0.3	5	5	5	5	5	5
299	0.3	5	5	4	5	5	5
443	0.3	5	5	5	5	5	5
301	0.3	2	2	2	2	2	3
298	0.3	5	5	4	5	5	5
313	0.3	3	3	2	4	3	5

TABLE 5-continued

Ex. No.	Dose (kg a.i./ha)	Pre-emergence action of the compounds according to the invention: Herbicidal action LOMU	ECCR	AVSA	STME	CHSE	SIAL
446	0.3	5	3	5	4	3	5
445	0.3	5	4	5	5	2	4
756	0.3	5	5	5	5	5	5
442	0.3	5	5	5	5	5	5
455	0.3	3	2	2	3	3	5
770	0.3	5	5	5	5	5	5
854	0.3	5	5	5	5	5	5
8	0.3	5	5	5	5	5	5
5	0.3	5	5	5	5	5	5
142	0.3	5	5	5	5	5	5
340	0.3	5	5	3	5	5	5
573	0.3	5	5	5	5	5	5

Abbreviations:
Ex. No. = Preparation example from TABLES 1 to 4
a.i. = active ingredient (based on pure active compound)
LOMU = Lolium multiflorum
ECCR = Echinochloa crus-galli
AVSA = Avena sativa
STME = Stellaria media
CHSE = Chrysanthemum segetum
STAL = Sinapis alba

2. Weed action post-emergence

Seeds or pieces of rhizome of monocotyledon and dicotyledon weeds were planted in sandy loam soil in plastic pots, covered with earth and raised in a greenhouse under good growth conditions. Three weeks after sowing, the experimental plants were treated in the three-leaf stage.

The compounds according to the invention formulated as wettable powders or as emulsion concentrates were sprayed onto the green parts of plants in various dosages using a water application rate of 600 to 800 l/ha after conversion and, after a standing time of the experimental plants in the greenhouse under optimum growth conditions of about 3 to 4 weeks, the action of the preparations was assessed visually in comparison to untreated controls.

The agents according to the invention also show a good herbicidal activity post-emergence against a broad spectrum of economically important weed grasses and weeds (cf. Table 6).

TABLE 6

Ex. No.	Dose (kg a.i./ha)	Herbicidal action LOMU	ECCR	AVSA	STME	CHSE	SIAL
1	0.3	5	5	5	5	5	5
136	0.3	3	4	1	5	5	5
4	0.3	5	5	5	5	5	5
411	0.3	5	5	4	5	5	5
354	0.3	5	5	5	5	5	5
439	0.3	5	5	5	5	5	5
7	0.3	5	5	5	5	5	5
299	0.3	3	3	2	3	2	5
443	0.3	5	5	5	5	3	5
298	0.3	3	5	2	4	3	5
445	0.3	3	2	2	3	4	3
756	0.3	5	4	3	4	4	5
442	0.3	5	2	3	3	2	4
770	0.3	5	3	3	3	3	3
854	0.3	4	5	4	4	5	5

TABLE 6-continued

Ex. No.	Dose (kg a.i./ha)	Herbicidal action LOMU	ECCR	AVSA	STME	CHSE	SIAL
8	0.3	5	5	5	5	3	5
5	0.3	5	5	5	5	5	5
142	0.3	4	2	2	4	1	3
340	0.3	3	3	0	5	2	5
573	0.3	5	5	5	5	5	5

Abbreviations:
Ex. No. = Preparation example from TABLES 1 to 4
a.i. = active ingredient (based on pure active compound)
LOMU = Lolium multiflorum
ECCR = Echinochloa crus-galli
AVSA = Avena sativa
STME = Stellaria media
CHSE = Chrysanthemum segetum
STAL = Sinapis alba

3. Crop plant tolerability

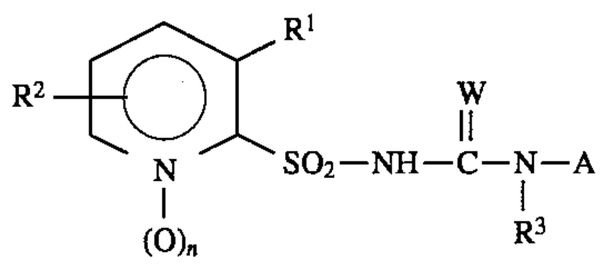
In further experiments in a greenhouse, seeds of a relatively large number of crop plants and weeds were planted in sandy loam soil and covered with earth.

Some of the pots were immediately treated as described under 1 and the others were placed in a greenhouse until the plants had developed two to three true leaves and then sprayed with the substances according to the invention in various dosages, as described under 2.

Four to five weeks after application and standing in a greenhouse, it was determined by means of optical assessment that the compounds according to the invention left dicotyl crops such as, for example, soya, cotton, rape, sugarbeet and potatoes undamaged pre- and post-emergence even at high active compound dosages. Moreover, some substances also spared gramineous crops such as, for example, barley, wheat, rye, sorghum millet, corn and rice. The compounds of the formula (I) thus have a high selectivity when used for controlling undesired plant growth in agricultural crops.

We claim:

1. A compound of the formula (I) or its salts



(I)

in which

R^1 is iodine,

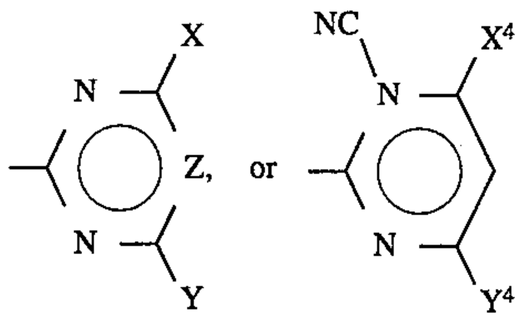
R^2 is H, $(C_1–C_4)$alkyl, $(C_1–C_3)$haloalkyl, halogen, NO_2, CN, $(C_1–C_3)$alkoxy, $(C_1–C_3)$haloalkoxy, $(C_1–C_3)$alkylthio, $(C_1–C_3)$ alkoxy-$(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxycarbonyl, $(C_1–C_3)$alkylamino, di[$(C_1–C_3)$alkyl]amino, $(C_1–C_3)$alkylsulfinyl, $(C_1–C_3)$alkylsulfonyl, $SO_2NR^aR^b$ or $C(O)NR^aR^b$, R^a and R^b)independently of one another are H, $(C_1–C_3)$alkyl, $(C_3–C_4)$alkenyl, propargyl, or together are —$(CH_2)_4$—, —$(CH_2)_5$— or $CH_2CH_2OCH_2CH_2$—,

R^3 is H or CH_3,

n is zero or 1,

W is O or S,

A is a radical of the formula



X is H, halogen, $(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxy, where the two last-mentioned radicals are unsubstituted or monosubstituted or polysubstituted by halogen or monosubstituted by $(C_1–C_3)$alkoxy,

Y is H, $(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxy or $(C_1–C_3)$alkylthio, where the above-mentioned alkyl-containing radicals are unsubstituted or monosubstituted or polysubstituted by halogen or monosubstituted or disubstituted by $(C_1–C_3)$alkoxy or $(C_1–C_3)$alkylthio, or is a radical of the formula NR^8R^9, $(C_1–C_6)$-cycloalkyl, $(C_2–C_4)$alkenyl, $(C_2–C_4)$alkynyl, $(C_3–C_4)$alkenyloxy or $(C_3–C_4)$alkynyloxy,

Z is CH,

R^8 and R^9 independently of one another are H, $(C_1–C_3)$alkyl or $(C_3–C_4)$alkenyl,

X^4 is CH_3, OCH_3, OC_2H_5, CH_2OCH_3 or Cl,

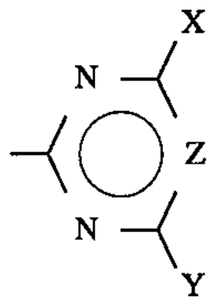
Y^4 CH_3, OCH_3, OC_2H_5 or Cl.

2. A compound as claimed in claim **1**, wherein

W is an oxygen atom,

n is the number zero and

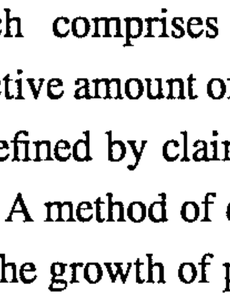
A is a radical of the formula



3. A compound as claimed in claim **1**, wherein

R^2 is H, $(C_1–C_3)$alkyl, $(C_1–C_3)$alkoxy, halogen or $(C_1–C_3)$alkylthio,

and A is a radical of the formula



in which

Z is CH,

X is halogen, $(C_1–C_2)$alkyl, $(C_1–C_2)$alkoxy, OCF_2H, CF_3 or OCH_2CF_3 and

Y is $(C_1–C_2)$alkyl, $(C_1–C_2)$alkoxy or OCF_2H.

4. The compound of claim **3** wherein R^2 is H, R^3 is H, n is zero, W is 0,)and X and Y are each —OCH_3.

5. A herbicide or plant growth-regulating composition, which comprises a herbicidally or growth-regulatingly effective amount of a compound of the formula (I) or its salts as defined by claim **1** and formulation auxiliaries.

6. A method of combating undesired plants or of regulating the growth of plants, comprising applying an amount of a compound of the formula (I) or its salts as defined by claim **1**, which is herbicidally effective or effective for regulating the growth of plants to the plants, plant seed or a cultivated area.

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